PAWS REPORT
50th
ANNIVERSARY

Valley Water

FEBRUARY 2021
50th Annual Report
FY 2021-22

Protection and Augmentation of Water Supplies

Valley Water
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614
www.valleywater.org

February 26, 2021

Dear Valley Water Stakeholder:

The Santa Clara Valley Water District (Valley Water) has released its 50th Annual Report on the Protection and Augmentation of Water Supplies, which documents Valley Water's efforts to ensure a reliable water supply to support a healthy life, environment and economy in Santa Clara County. It presents the basis for the proposed maximum groundwater production charges for fiscal year (FY) 2021-22, and is posted on our website, ***www.valleywater.org***.

In an effort to provide you more time to review this information, this report is published and filed in advance of Valley Water's public hearings on the groundwater production charges, scheduled in April 2021.

Valley Water replenishes on average, two-thirds of the groundwater used by water retailers, residents, and businesses in Santa Clara County. With revenue from groundwater production charges, Valley Water protects and augments water supplies for the health, welfare, and safety of the community. The activities, programs and services undertaken with funding from groundwater production charges include:

Infrastructure
- Plan and construct improvements to infrastructure such as dams, pipelines, recharge ponds, drinking water and recycled water treatment plants, and pump stations.
- Operate and maintain dams, pipelines, recharge ponds, treatment plants and pumping stations to help sustain the groundwater basins.

Water supplies
- Operate and maintain local reservoirs to capture water and fill groundwater percolation ponds.
- Purchase imported water and develop local water supplies to replenish the groundwater basin.

Water quality
- Monitor and protect groundwater from pollutants.
- Ensure proper construction and destruction of wells to prevent contaminants from infiltrating the groundwater basin.

Last year (FY2020-21), Valley Water Board of Directors elected to forego rate increases due to the impacts of Covid-19 on our community. While Valley Water continually strives for cost reductions and better utilization of the public's assets entrusted to us, we must align water charges with the costs to deliver the services the community relies upon.

The historic drought of 2012-2016 showed we must be prepared for climate change and more frequent and severe droughts. An immediate challenge facing Santa Clara County is widespread drought conditions during this dry winter, coupled with the recent lowering of water levels at Anderson Reservoir, the county's largest surface water supply source. Consequently, in order to continue to provide the community with a reliable supply of safe, clean water, we are preparing to purchase a significant amount of supplemental water to import into our county.

continued on next page...

Valley Water continues to make progress on large infrastructure investments, including the Rinconada Water Treatment Plant upgrade, which will extend the plant's service life for the next 50 years, in addition to increasing its capacity by 25%, and the Anderson Dam Seismic Retrofit, which addresses public safety as well as the state's storage restrictions that limit our local water supply. Valley Water is concerned about the rising cost of water and is charting a course for the future in accordance with the Water Supply Master Plan 2040 (WSMP) to achieve future water supply reliability at the lowest cost.

Last year, Valley Water completed a scientific study of its groundwater benefit zones. The North County groundwater benefit zone (Zone W-2) encompasses the Santa Clara Subbasin in North Santa Clara County. South County groundwater benefit zones include Zone W-5 in the Llagas Subbasin; Zone W-7, which encompasses the Coyote Valley; and Zone W-8 which encompasses areas in the foothills southeast of Uvas and Chesbro Reservoirs. More information on the study can be found online at ***https://www.valleywater.org/gwbenefits***.

The following represents the staff proposed maximum rate increases for groundwater benefit zones for FY 2021-22:

North County

- **Zone W-2, up to a 9.6% increase, or a $4.55 per month increase to the average household**

South County

- **Zone W-5, up to a 4.6% increase, or a $0.74 per month increase to the average household**
- **Zone W-7, up to a 10.3% increase, or a $1.70 per month increase to the average household**
- **Zone W-8, up to a 4.4% increase, or a $0.50 per month increase to the average household**

Santa Clara County

Agricultural groundwater users in all zones, up to a 196% increase, or roughly a $9.41 increase per month per acre.

I encourage you to learn more about these important groundwater issues. In addition to the information on our website at ***www.valleywater.org***, the following opportunities are also available for you to gather information and provide input:

April 13, 2021 - 1:00 p.m. • Board meeting • Time certain	Public Hearing (opens) Teleconference Zoom Meeting ***https://valleywater.zoom.us/j/95060012118*** Meeting ID: 950 6001 2118 Call-in: 1-669-900-9128
April 15, 2021 • 6:00 p.m. open house	Public Hearing & Open House Focused on South County Teleconference Zoom Meeting ***https://valleywater.zoom.us/j/99875795135*** Meeting ID: 998 7579 5135 Call-in: 1-669-900-9128
• 7:00 p.m. meeting	Teleconference Zoom Meeting ***https://valleywater.zoom.us/j/95060012118*** Meeting ID: 950 6001 2118 Call-in: 1-669-900-9128
April 27, 2021 - 6:00 p.m. • Board meeting • Time certain	Public Hearing (concludes) Teleconference Zoom Meeting ***https://valleywater.zoom.us/j/95060012118*** Meeting ID: 950 6001 2118 Call-in: 1-669-900-9128

If you have questions or concerns about groundwater, this year's charge-setting process, or how we can better serve you, please join us at an upcoming open house or public hearing, or visit our website, ***www.valleywater.org***. You may also contact us directly by phone at **(408) 265-2600** or email at ***clerkoftheboard@valleywater.org***.

Sincerely,

Aaron Baker

Aaron Baker, P.E.
Chief Operating Officer
Water Utility Enterprise

50th Annual Report

Protection and Augumentation of Water Supplies
2021–2022

Board of Directors:
Tony Estremera – District 6, Chair
Gary Kremen – District 7, Vice Chair
John L. Varela – District 1
Barbara Keegan – District 2
Richard P. Santos – District 3
Linda J. LeZotte – District 4
Nai Hsueh – District 5

Prepared by:
Darin Taylor, Chief Financial Officer
Carmen Narayanan, Financial Planning
& Revenue Manager
Jennifer Abadilla, Senior Management Analyst

Under the Direction of:
Rick Callender, Esq., Chief Executive Officer
Melanie Richardson, P.E.,
Assistant Chief Executive Officer
Aaron Baker, P.E., Chief Operating Officer,
Water Utility Enterprise
Rachael Gibson, Chief of External Affairs

Contributors:
Chanie Abuye
Benjamin Apolo III
Linda Arluck
Hossein Ashktorab
Erin Baker
Neeta Bijoor
Frances Brewster
Debra Butler
Gerald De La Piedra
Vanessa De La Piedra
Hemang Desai
Bal Ganjoo
Andrew Garcia
Samantha Greene
Jason Gurdak
Christopher Hakes
Robert Harvie
Linh Hoang
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Karen Koppett
Jimin Oh Lee
Eric Leitterman
Joy O. Lim
Yaping Liu
Julio Maravilla
Heath McMahon
James O'Brien
John Pfister
Lisa Porcella
Mike Potter
Metra Richert
Jennifer Schmidt
Samina Shaikh
Jennifer Schmidt
Miguel Silva
Medi Sinaki
Ranithri Slayton
Kirsten Struve
David Tucker
Jing Wu
Sehee Yang
Sarah Young
Xiaoyong Zhan

DISCLAIMER

The water utility financial forecast set forth herein was required to be prepared by California statutes for rate setting and other purposes and was not prepared to comply with the District's continuing disclosure or other federal securities law disclosure obligations. The forecast represents the estimate of projected financial results of certain funds of the District related to the District's water utility and is based upon the District's judgment of the most probable occurrence of certain future events at the time this forecast is published. Such projected financial forecast is based on a variety of assumptions which are material in the development thereof, and variations in the assumptions may produce substantially different forecast results. Actual operating results achieved during the projection period may vary from those presented in the forecast and such variations may be material. Revenues, operating outlays and other amounts set forth above (i) are presented on a budgetary basis which is not consistent with generally accepted accounting principles in all respects, and (ii) may not be presented consistent with the requirements of other statutes, regulations or contractual obligations applicable to or entered into by the District, including but not limited to bonds, notes or other obligations issued by or on behalf of the District and payable from the Water Enterprise Fund and the State Water Project Fund. The Senior and Parity Debt Service Coverage calculation included herein is prepared for general reference and may not conform to the debt service coverage calculation formulas pursuant to the Water Utility Senior or Parity Master Resolutions or other calculations applicable to the Water Enterprise Fund and the State Water Project Fund individually. Investors or potential investors considering the purchase or sale of District bonds, notes or other obligations are referred to information filed by the District on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System for municipal securities disclosures, maintained on the World Wide Web at ***https://emma.msrb.org/***.

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EXECUTIVE SUMMARY

The 50th annual report on the Santa Clara Valley Water District's (Valley Water) activities in the protection and augmentation of water supplies, is prepared in accordance with the requirements of the District Act, section 26.5.

In 2020, Valley Water's conjunctive management program provided the county with 195,000 acre-feet of water supply, relative to total water use of 306,000 acre-feet. Imported water supply allocations were low at 20% for State Water Project (SWP) water and 70% for Municipal and Industrial Central Valley Project (CVP) water due to dry conditions. Due to these low imported water allocations, Valley Water withdrew banked groundwater supplies from Semitropic Water Storage District for use in our service area, reducing banked groundwater supplies from 350,000 acre feet to 333,000 acre feet. Total storage in Valley Water reservoirs as of February 1, 2021 was 34 percent of the 20-year average and 17 percent of capacity, or about 27,632 acre-feet. Groundwater storage decreased slightly in 2020 by about 27,000 acre-feet to an estimated 331,000 acre-feet. The healthy 2020 groundwater reserves can be attributed to continued water use reduction by the community and fair hydrologic conditions. See Section 1, "Current Water Demand and Water Supply Conditions" for more details.

Valley Water estimates that increases in population and jobs will result in an increase in water demands from a current annual average of about 310,000 acre-feet to about 335,000 acre-feet in 2040. According to Valley Water's Water Supply Master Plan 2040, average water supplies appear to be sufficient to meet future water demand by investing in the maintenance of existing supplies and infrastructure, as well as a diverse suite of cost-effective projects including potable reuse, the Transfer Bethany Pipeline portion of the Los Vaqueros Reservoir Expansion Project, the planned Pacheco Reservoir Expansion, and the Delta Conveyance Project. If other risks or uncertainties are realized, additional investment may be necessary. The Water Supply Master Plan's Monitoring and Assessment Program (MAP) provides a mechanism for adapting to changing supply and demand conditions. See Section 2, "Future Water Demand and Water Supply Availability" for more details.

Chesbro reservoir

Maintaining existing infrastructures provides the foundation for meeting current and future supply needs. The Anderson Dam seismic retrofit, the Rinconada Water Treatment Plant reliability improvements, and other aging infrastructure renewal projects like the 10-Year Pipeline Rehabilitation Program comprise a large part of the proposed FY 22-26 capital improvement program. Section 3, "Programs to Sustain Water Supply Availability" further elaborates on the long-term investment strategy, which is composed of seismic retrofit, recycled/purified water, surface water storage expansion, and asset renewal and improvement projects. The existing agreement with the Cities of Palo Alto and Mountain View is a key component of a strategy to develop a purified water program which would produce between 9,000 and 12,000 acre-feet of new water supply for the county.

Staff developed a groundwater charge projection for the next 10 years based on the Valley Water Board of Directors input during the January 2021 board meetings. Last year (FY 2020-21), Valley Water Board of Directors elected to forego rate increases due to the impacts of Covid-19 on the community. While Valley Water continually strives for cost reductions and better utilization of the public's assets, it is imperative to align water charges with the costs to deliver the services the community relies upon. Consequently, an increase in the groundwater charge projection in North County Zone W-2 is recommended. The increase is driven by multiple factors: 1) the need to purchase supplemental imported water given the current drought conditions so far, coupled with the fact that the County's largest reservoir, Anderson reservoir, has been drained; 2) to continue to pay for the Anderson Dam Seismic Retrofit, which will address public safety and restore operational capacity; 3) to fund key baseline projects including the Rinconada WTP reliability improvement and 10-year pipeline rehabilitation program; 4) to advance the Pacheco Reservoir Expansion, which would provide additional water storage capacity; 5) to cover the cost of general inflation.

For South County Zones (W-5, W-7, and W-8) an increase in the groundwater charge projection for FY 2021-22 is also recommended. Key drivers include: 1) the need to purchase supplemental imported water given the current drought conditions so far, coupled with the fact that the County's largest reservoir, Anderson reservoir, has been drained; 2) to continue to pay for the Anderson Dam Seismic Retrofit, which will address public safety and restore operational capacity; 3) to fund the Santa Clara Conduit Rehabilitation including an acoustic fiber optic monitoring system; 4) to advance the Pacheco Reservoir Expansion, which would provide additional water storage capacity; 5) to cover the cost of general inflation.

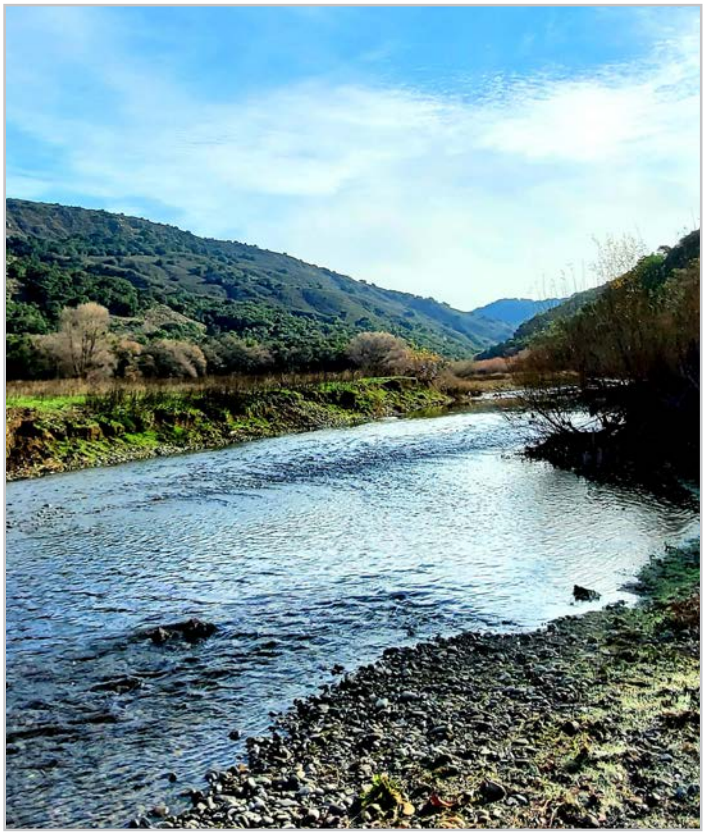
Section 4 provides more details on the financial analysis of the Water Utility, including future capital improvement and maintenance requirements, operating requirements, financing methods and the proposed groundwater production and other water charges by zone for FY 2021-22.

In FY 2019-20, Valley Water completed a scientific study of its groundwater benefit zones. South County groundwater benefit zones include Zone W-5 over the Llagas Subbasin; Zone W-7, which encompasses the Coyote Valley; and Zone W-8 which encompasses areas in the foothills southeast of Uvas and Chesbro Reservoirs. See Appendix E for further details.

For zone W-2 in the North County, staff proposes an increase of up to 9.6 percent for the Municipal and Industrial (M&I) groundwater charge for FY 2021-22. Staff proposes an increase in the contract treated water surcharge from $100 per acre-foot to up to $115 per acre-foot to be more aligned with the cost that retailers would incur to deliver treated water pumped from their own wells. Based on information gathered from retailers, staff believes that this price would be closer to the point of neutrality where a retailer would be indifferent in the short term as to whether to pump water from the ground or take treated water. The staff recommended groundwater charge for FY 2021-22 for Zone W-5 is an increase of up to 4.6 percent from the prior year. For Zone W-7 staff is proposing an increase of up to 10.3 percent from the prior year, and for Zone W-8 staff is proposing an increase of up to 4.4 percent from the prior year.

For agricultural groundwater users, the staff proposed maximum is at 25 percent of the lowest M&I rate in any zone (Zone W-8) based on direction from the Valley Water Board of Directors.

Staff-proposed rate changes for surface water users are a function of the groundwater charge in each zone and cover the same types of costs as groundwater charges, as surface water users enjoy the same conjunctive use benefits. Surface water rates also include a small fixed charge to recover the cost of delivering and maintaining surface water infrastructure. The staff recommended charges are shown in the right-hand column of the chart on the next page.



Coyote Creek Storm Water Sites

PROTECTION AND AUGMENTATION OF WATER SUPPLIES 2021-2022

		Dollars Per Acre Foot		
	Basic User/Groundwater Production Charge	**FY 2019-20**	**FY 2020 - 21**	Proposed Maximum **FY 2021-22**
Zone W-2 (North County)	Municipal and Industrial	1,374.00	1,374.00	1,506.00
	Agricultural	28.86	28.86	85.38
	Surface Water Charge			
	Surface Water Master Charge	37.50	37.50	41.10
	Total Surface Water, Municipal and Industrial*	1,411.50	1,411.50	1,547.10
	Total Surface Water, Agricultural*	66.36	66.36	126.48
	Treated Water Charges			
	Contract Surcharge	100.00	100.00	115.00
	Total Treated Water Contract Charge**	1,474.00	1,474.00	1,1621.00
	Non-Contract Surcharge	200.00	200.00	200.00
	Total Treated Water Non-Contract Charge***	1,574.00	1,574.00	1,706.00
Zone W-5 (Llagas Subbasin)	**Basic User/Groundwater Production Charge**			
	Municipal and Industrial	481.00	467.00	488.50
	Agricultural	28.86	28.86	85.38
	Surface Water Charge			
	Surface Water Master Charge	37.50	37.50	41.10
	Total Surface Water, Municipal and Industrial*	518.50	504.50	529.60
	Total Surface Water, Agricultural*	66.36	66.36	126.48
	Recycled Water Charges			
	Municipal and Industrial	461.00	447.00	468.50
	Agricultural	56.26	56.26	112.78
Zone W-7 (Coyote Valley)	**Basic User/Groundwater Production Charge**			
	Municipal and Industrial	481.00	481.00	530.50
	Agricultural	28.86	28.86	85.38
	Surface Water Charge			
	Surface Water Master Charge	37.50	37.50	41.10
	Total Surface Water, Municipal and Industrial*	518.50	518.50	571.60
	Total Surface Water, Agricultural*	66.36	66.36	126.48
Zone W-8 (Uvas/Chesbro)	**Basic User/Groundwater Production Charge**			
	Municipal and Industrial	481.00	327.00	341.50
	Agricultural	28.86	28.86	85.38
	Surface Water Charge			
	Surface Water Master Charge	37.50	37.50	41.10
	Total Surface Water, Municipal and Industrial*	518.50	364.50	382.60
	Total Surface Water, Agricultural*	66.36	66.36	126.48

*Note: The total surface water charge is the sum of the basic user charge (which equals the groundwater production charge) plus the water master charge

**Note: The total treated water contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the contract surcharge

***Note: The total treated water non-contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the non-contract surcharge

Background and History

The Santa Clara Valley Water District (Valley Water) is a special district originally formed in 1929. Valley Water is authorized to supply water and provide flood protection services in Santa Clara County, California which includes 15 incorporated cities/towns (Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga and Sunnyvale).

Valley Water seeks to provide water supply of adequate quantity and quality to meet the desired quality of life in the community. To fulfill this mission, Valley Water imports water into the county, manages two groundwater subbasins, and owns and operates three water treatment plants, an advanced water purification center, a state-of-the-art water quality laboratory, ten reservoirs, three pumping stations, a hydroelectric plant, numerous recharge facilities in seven major recharge systems, and related distribution facilities. Valley Water is authorized to import, store, treat and distribute water within its jurisdictional boundaries to provide water in sufficient quantity and quality for present and future beneficial use.

Valley Water wholesales drinking water to water retailers and protects and augments groundwater for the benefit of multiple water retailers, mutual water companies and thousands of private well owners that pump groundwater. Water retailers then deliver water to the consumers in the county. Valley Water receives revenue from groundwater charges for water pumped from areas receiving benefit from Valley Water groundwater management activities, in addition to revenue from the sale of treated water, nonpotable surface water and recycled water.

What do Groundwater Production Charges pay for?

What you get

Benefits

- Reliable, healthy and clean drinking water
- Diverse water supply sources
- Protected and sustained water resources
- Maximized water conservation and recycling
- Reduced risk of subsidence through sustainable groundwater management

What we do

Replenish the groundwater basin

- Operate and maintain local reservoirs to capture water and fill recharge ponds.
- Purchase imported water.
- Provide treated drinking water to offset groundwater pumping (in-lieu recharge).

Ensure safe drinking water

- Monitor and protect groundwater from pollutants.
- Ensure proper construction and destruction of wells.

Construct, maintain and repair

- Plan and construct improvements to infrastructure such as dams, pipelines, ponds, treatment plants and pump stations.
- Operate and maintain pipelines and pumping plants to help sustain the groundwater aquifer.

PROTECTION AND AUGMENTATION OF WATER SUPPLIES 2021-2022

Local water

A complex network of reservoirs, creeks and specialized ponds replenishes the groundwater basin. The same system is also used to transport imported water so that it, too, can be used to replenish the aquifer. It all works so well that managed recharge actually exceeds natural recharge in nearly all years.

Water pumped from the groundwater basin through wells is used by private well owners, farmers and water retailers. Some water captured in reservoirs is processed at state-of- the art drinking water treatment plants. The treated water is sold to local water retailers, such as San Jose Water Company, who uses their own distribution systems to serve customers.

Imported water

Much of the county's current water supply comes from hundreds of miles away, first as snow or rain in the Sierra Nevada range of northern and eastern California, then as water in rivers that flow toward the Sacramento-San Joaquin River Delta. This imported water is brought into the county through the complex infrastructure of the State Water Project, the federal Central Valley Project and San Francisco's Hetch Hetchy system. Three drinking water treatment plants deliver imported water to customers, while the rest is used to replenish groundwater basins.

Having treated imported water available to meet demands protects the groundwater basin from over pumping.

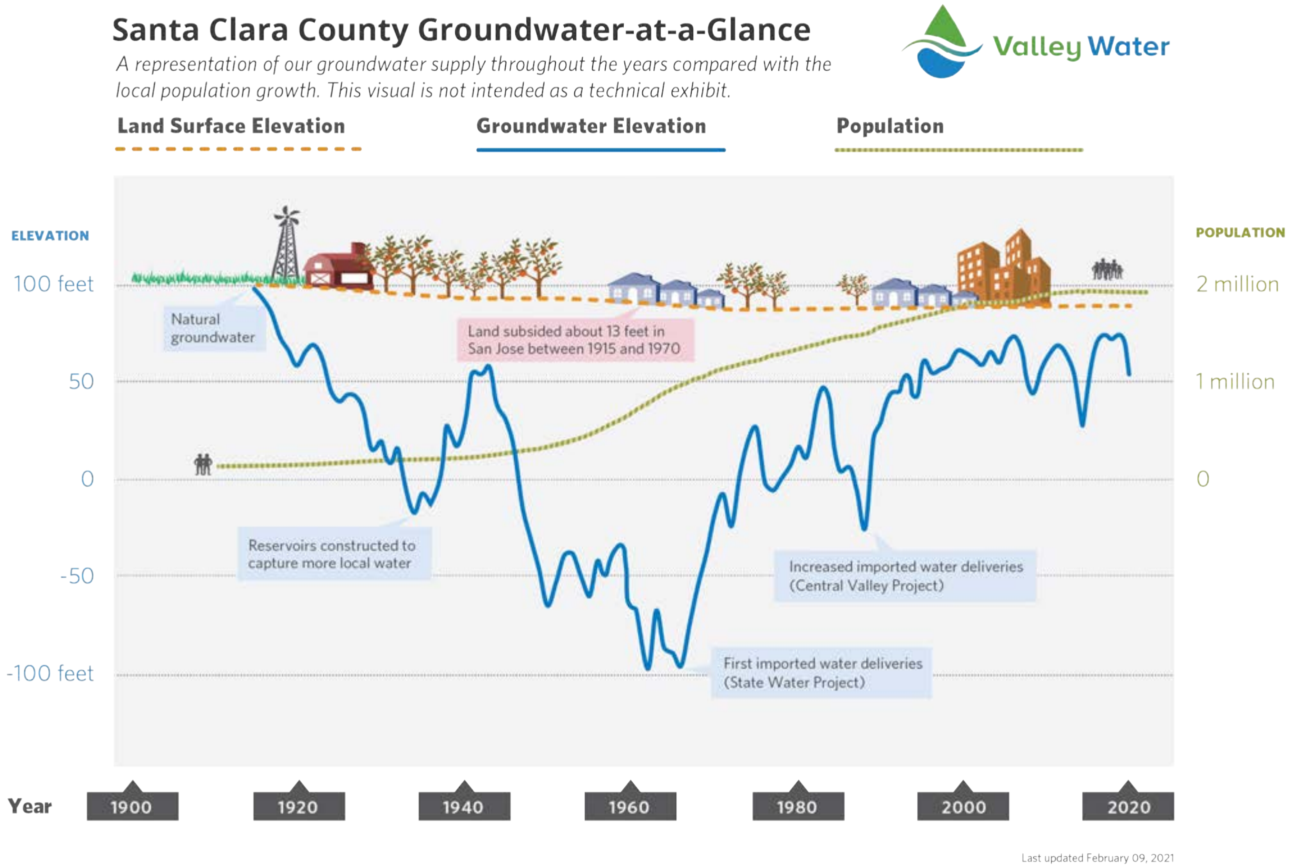
Recycled/Purified water

An important and growing source of water is recycled and purified water. Used primarily for irrigation by industry and agriculture, recycled water is wastewater that has been treated to meet strict standards set by the State Water Resources Control Board.

Using recycled water helps conserve drinking water supplies and provides a drought-resilient water supply, while reducing dependency on imported water and groundwater. Additionally, there are environmental benefits of helping to preserve our saltwater and tidal habitat by reducing freshwater discharge to the San Francisco Bay in the north county. Recycled water also minimizes treated wastewater discharge to the Pajaro River at certain times in the south county.

Local water supplies make up the foundation of water supply in Santa Clara County, but need to be augmented to reliably meet the demands of the county. Imported water supplies, and of increasing importance, recycled and purified water supplies are key to Valley Water's conjunctive management efforts to help maintain a reliable water supply.

Previous generations invested in the water system, and it's now our turn to invest for our children and their children. Smart investments will decrease the magnitude of critical shortages in water supplies due to hydrologic conditions, regulatory actions and climate change impacts such as severe droughts.



Over the years, Valley Water's water importation and groundwater management activities have stabilized groundwater levels and prevented land subsidence, or sinking.

Valley Water's water importation and groundwater management activities halted land subsidence or sinking around 1970 and resulted in groundwater level recovery. These activities remain essential in preventing subsidence and ensuring sustainable groundwater supplies.

Without Valley Water's conjunctive management programs (including managed and in-lieu recharge), groundwater levels would be considerably lower than they are today, reducing water supply reliability and increasing the risks of renewed land subsidence and saltwater intrusion.

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2021 PAWS REPORT

Current Water Demand and Water Supply Conditions

1-1 WATER SUPPLY OVERVIEW

The mission of the Santa Clara Valley Water District (Valley Water) is to provide Silicon Valley safe, clean water for a healthy life, environment and economy. Accordingly, Valley Water employs an integrated approach to manage a sustainable water supply through conjunctive management and use of surface water and groundwater resources to maximize water use efficiency.

Water supply is comprised of “incoming” supplies from local and imported sources, as well as previously stored supplies, referred to as carryover, withdrawn from in-county and/or out-of-county surface water and groundwater storage.

Local Supplies

Local groundwater resources make up the foundation of water supply in Santa Clara County, but they need to be augmented by Valley Water’s comprehensive water supply management activities to reliably meet the needs of county residents, businesses, agriculture, and the environment. These activities include direct managed recharge as well as the provision of treated and untreated surface water, acquisition of supplemental water supplies, water conservation and recycling, and programs to protect, manage and sustain water resources, collectively referred to as in-lieu groundwater recharge. These activities are considered “in-lieu” recharge since they have the same beneficial effect on groundwater supplies as direct replenishment.

Runoff from precipitation constitutes the bulk of the local water supplies and is captured in local reservoirs. The water is released for groundwater recharge, in-stream environmental/ecological purposes (maintain fish and wildlife habitat), local surface water customers, and treatment at the treatment plants. Some of the precipitation infiltrates and recharges the groundwater basins, although this natural recharge is insufficient to fully replenish groundwater pumped from the basins.

An additional local water supply is recycled water used for non-potable purposes. Use of recycled water offsets demand for potable water. Every gallon of recycled water used in this county saves an equal gallon of groundwater or treated drinking water.

Imported Supplies

Valley Water’s imported sources of supply originate from natural runoff and releases from statewide reservoirs and are pumped out of the Sacramento-San Joaquin Delta (Delta) by the State Water Project (SWP) and the federal Central Valley Project (CVP). Valley Water holds contracts with the State government for up to100,000 acre-feet of supply from the SWP and federal government for up to

152,500 acre-feet of supply from the CVP, per year, respectively. Actual deliveries depend on the availability of water supplies after meeting regulations to protect the environment and Delta water quality. The imported water delivered by the SWP and CVP is sent to Valley Water's three water treatment plants, used to supplement groundwater recharge, or stored in local and State reservoirs for use in subsequent years. Valley Water also stores some of its imported water in the Semitropic Groundwater Bank in Kern County for withdrawal during dry periods. Treated imported water is sold to seven of the 13 water retailers located within Santa Clara County to offset groundwater pumping. Valley Water may also augment its imported supplies by taking deliveries of available temporary flood flows from the Delta watershed early in the year before imported water contract allocations and local hydrology are known. If water supplies are insufficient to meet needs, Valley Water may also purchase transfer water or participate in exchanges to supplement supplies; both transfer and exchange supplies are conveyed to Santa Clara County through the Delta. Additionally, eight water retailers purchase water from the City and County of San Francisco that originates from the Tuolumne River watershed and watersheds in the Bay Area. Without all these supplemental supplies, groundwater pumping would exceed sustainable groundwater extraction levels.

Conjunctive Water Management

Since the 1930s, Valley Water's water supply strategy has been to coordinate the management and use of surface water and groundwater to maximize water supply reliability, which is known as conjunctive management. The Sustainable Groundwater Management Act (SGMA) was signed into State law in September 2014, with the intent of promoting the local, sustainable management of groundwater supplies. SGMA identifies the Santa Clara Valley Water District as one of fifteen exclusive groundwater management agencies within their jurisdictions. In May 2016, Valley Water's Board of Directors (Board) adopted a resolution to become the Groundwater Sustainability Agency for the Santa Clara and Llagas subbasins. In November 2016, the Board adopted the 2016 Groundwater Management Plan (GWMP), which describes Valley Water's conjunctive management activities, as well as groundwater sustainability goals, strategies, and related outcome measures. The 2016 GWMP was approved by the California Department of Water Resources (DWR) in 2019 as an alternative to a Groundwater Sustainability Plan (GSP), in compliance with SGMA. Since March 2018, Valley Water has submitted an annual compliance report to DWR as required by SGMA. Valley Water will continue to sustainably manage the Santa Clara and Llagas subbasins according to the District Act and will fully comply with SGMA.

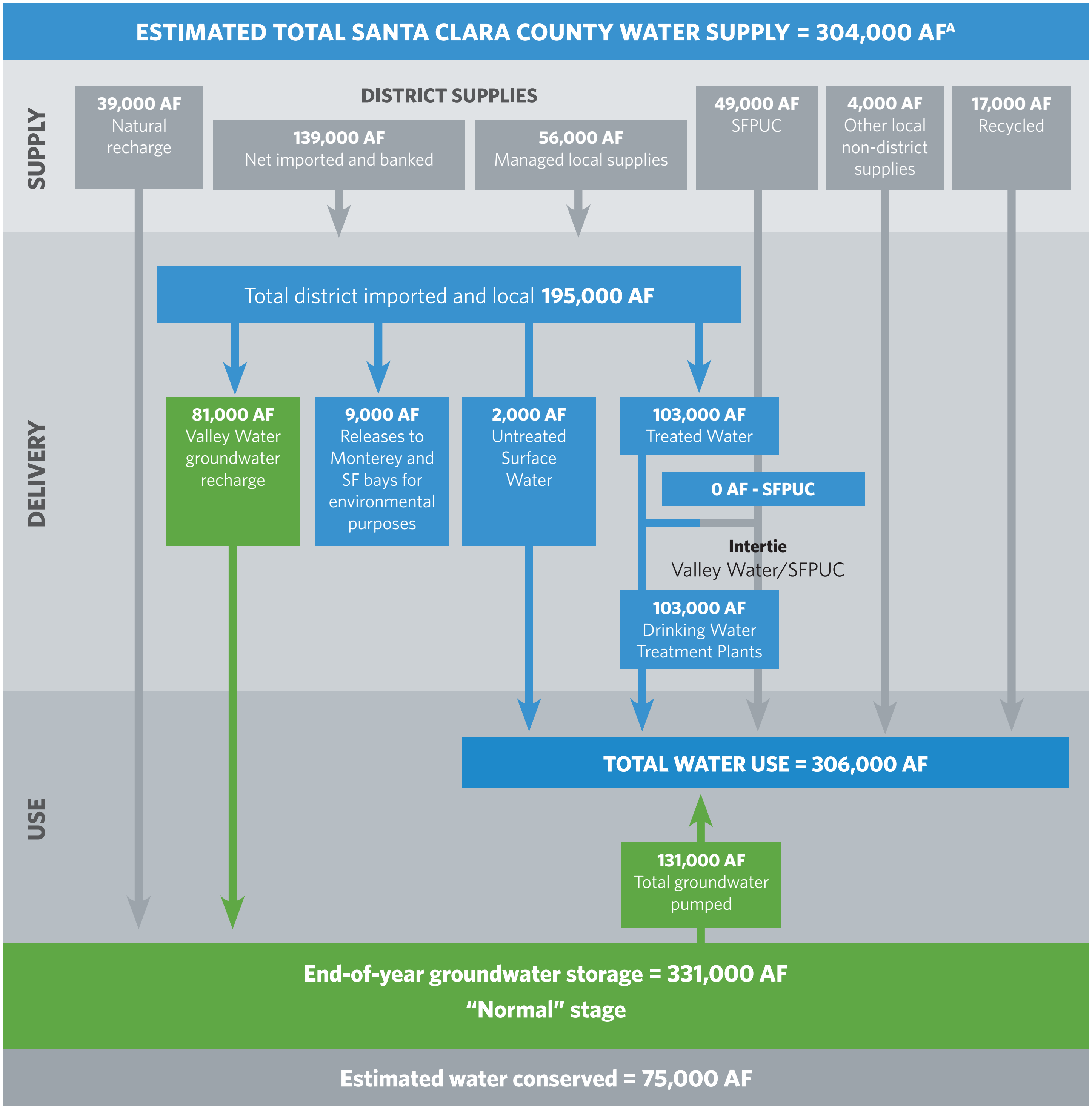
A key Valley Water conjunctive management effort involves using imported and local surface water to recharge the groundwater subbasins. Valley Water also provides treated and raw surface water to customers, which offsets demands on the groundwater subbasins. Water conservation and recycled water use offset demands on both surface water and groundwater. All these activities help maintain a reliable water supply.

Current Water Demand and Water Supply Conditions

Figure 1-1.1 shows Calendar Year 2020 estimated total water supply for Santa Clara County. Valley Water managed recharge programs replenished the groundwater basins with about 81,000 acre- feet of local and imported surface water. The largest source of in-lieu recharge was the distribution of treated water (103,000 acre-feet). Valley Water saved an estimated 75,000 acre-feet of water through programs designed to reduce residential, commercial, and agricultural water use and make conservation a way of life in the county. A smaller, but important and growing source of in-lieu recharge is recycled water, which provided about 17,000 acre-feet of water for irrigation, industry, and agriculture in 2020. Using recycled water reduces dependency on groundwater and surface water, helps conserve drinking water supplies, and provides a locally controlled, drought-resilient supply. Valley Water is partnering with local recycled water producers to further expand the use of recycled water.

Figure 1-1.1 Estimated Total Santa Clara County Water Supply for Calendar Year 2020

Calendar Year 2020


ESTIMATED TOTAL SANTA CLARA COUNTY WATER SUPPLY = 304,000 AF[A]
SUPPLY
39,000 AF Natural recharge
DISTRICT SUPPLIES
139,000 AF Net imported and banked
56,000 AF Managed local supplies
49,000 AF SFPUC
4,000 AF Other local non-district supplies
17,000 AF Recycled
DELIVERY
Total district imported and local 195,000 AF
81,000 AF Valley Water groundwater recharge
9,000 AF Releases to Monterey and SF bays for environmental purposes
2,000 AF Untreated Surface Water
103,000 AF Treated Water
0 AF - SFPUC
Intertie Valley Water/SFPUC
103,000 AF Drinking Water Treatment Plants
USE
TOTAL WATER USE = 306,000 AF
131,000 AF Total groundwater pumped
End-of-year groundwater storage = 331,000 AF
"Normal" stage
Estimated water conserved = 75,000 AF

[A] County Water Supply includes net district and non-district surface water supplies and estimated rainfall recharge to groundwater basins.

[B] Natural recharge – Groundwater recharge not controlled by Valley Water, including rainfall and other natural seepage, irrigation return flows, and leakage from water systems, storm drains, and sewer/septic systems.

[C] Net imported supplies – Surface water imported from the Sacramento-San Joaquin Delta that is used to replenish groundwater or to supply water treatment plants and surface water users in Santa Clara County. This excludes water transferred into the Semitropic Water Bank in Kern County and imported water stored (i.e., carried over) for future use.

[D] Managed local supplies – Watershed rainfall/runoff captured in local reservoirs or previously stored local water that is used to replenish groundwater or to supply water treatment plants and surface water users in Santa Clara County. This excludes estimated evaporation and local supplies stored for future use.

[E] Includes municipal, industrial, agricultural and domestic uses.

Current Water Demand and Water Supply Conditions

Without Valley Water's conjunctive management programs (including managed and in-lieu recharge), groundwater levels would be considerably lower than they are today, reducing water supply reliability and increasing the risks of renewed land subsidence (sinking) and saltwater intrusion. Water supplies are becoming increasingly constrained by challenges including uncertainty in surface water supplies, extended droughts, and climate change. Maintaining Valley Water's conjunctive management programs and expanding them as needed is critical to making the best use of local water resources and ensuring a reliable water supply both now and in the future.

A limiting factor to a reliable water supply during drought or other shortages is the capacity and operational constraints of Valley Water's conjunctive management system of groundwater and surface-water reservoirs. The groundwater basins are Valley Water's largest water storage facility. However, most of the local surface-water reservoirs were sized for annual operations, storing water in winter for release to groundwater recharge in summer and fall. The exception is the Anderson-Coyote reservoir system, which historically provided valuable carryover of supplies from year to year and served as a backup supply source to Valley Water's water treatment plants when imported water deliveries are curtailed. However, Anderson Reservoir will not be available for backup supply until seismic retrofit activities have been completed. Calero Reservoir also serves as a backup supply to the drinking water treatment plants with dedicated storage preserved for emergency use; however, due to the seismic restriction placed on Calero Reservoir, its emergency pool is limited to 4,000 AF and is much smaller than Anderson's emergency pool of 20,000 AF. Due to the seismic retrofit of Anderson Dam, the largest reservoir in the county will not provide any usable storage capacity until project completion, estimated for 2030. Dam safety operating restrictions placed on Anderson, Coyote, Almaden, Calero and Guadalupe reservoirs have resulted in loss of close to 103,800 AF or nearly two-thirds of the total surface storage capacity (as shown in Table 1-1.1) as well as significant loss of water supply yield.

Table 1-1.1 Current and Restricted Capacities of Major Valley Water Reservoirs

Reservoir	Year Built	Reservoir Capacity[3] (acre-feet)	Restricted Capacity[3] (acre-feet)	Primary Use
Almaden[1]	1935	1,555	1,443	Groundwater recharge, treated for drinking water
Anderson[1,2]	1950	89,278	2,820	Groundwater recharge, treated for drinking water
Calero[1]	1935	9,738	4,414	Groundwater recharge, treated for drinking water
Chesbro	1955	7,967	7,967	Groundwater recharge
Coyote[1]	1936	22,541	11,843	Groundwater recharge, treated for drinking water
Guadalupe[1]	1935	3,320	2,134	Groundwater recharge
Lexington	1952	18,534	18,534	Groundwater recharge
Stevens Creek	1935	3,056	3,056	Groundwater recharge
Uvas	1957	9,688	9,688	Groundwater recharge
Vasona	1935	463	463	Groundwater recharge
Total		**166,140**	**62,362**	

[1] Reservoirs with dam safety operating restrictions

[2] Per Federal Energy Regulatory Commission Order, the capacity of Anderson Reservoir was restricted to the deadpool storage of 2,820 AF. As of October 1, 2020 Anderson Reservoir was required to begin drawing down to deadpool storage.

[3] Reservoir and restricted capacities were updated in FY 2018–19, FY 2019–20, and FY 2020–21 to reflect most recent surveying results.

As part of annual operations planning, Valley Water routinely opts to carry over a portion of imported water supplies for future years. Even though the amount is often limited by state or federal project operations, it provides cost-effective insurance against a subsequent dry year. Additionally, Valley Water has invested in a water banking program at the Semitropic Water Storage District which provides up to 350,000 acre-feet of out-of-county water storage capacity. Together with water transfers and exchanges, this additional storage helps Valley Water manage uncertainty and variability in supply as each water year[1] develops.

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[1] Water year is the twelve-month period between October 1 and September 30.

Managing a complex system of surface water and groundwater resources is further complicated by hydrologic uncertainties, regulatory restrictions, and aging infrastructure, as discussed in the following sections of this report.

1-2 CURRENT WATER SUPPLY CONDITIONS

Precipitation

Locally, rainfall for the 2019–20 season at downtown San José was at 62 percent of average[2]. Total rainfall from July 2019 through June 2020 resulted in an above-average rainfall season, based on data going back to 1874.

The 2020–21[3] rainfall year began with a below average December. Cumulative rainfall at the San José gauge from July 1, 2020 through December 31, 2020 was estimated to be 0.98 inches. Rainfall at the San José gauge in January 2021 totaled 3.27 inches, which is above average for that month. Cumulative local rainfall as of February 1, 2021 was 55 percent of seasonal average to date in San José and 80 percent in the Coyote watershed.

Statewide precipitation by February 1, 2021 was at 55 percent of seasonal average to date. As of February 1, 2021, statewide snow water equivalent was 11.8 inches and 68 percent of normal for that date.

Imported Water Allocations

Valley Water's SWP contract provides annual allocations of SWP supplies, and Valley Water's CVP contract provides allocations of both agricultural and Municipal and Industrial (M&I) supplies. The quantity of supply allocated depends on availability of those supplies after meeting regulations to protect the environment and Delta water quality.

Water year 2019-2020 marked a return to dry conditions. The SWP allocation for 2020 was initially set at 10 percent in December 2019 and increased to a final allocation of 20 percent in May 2020. The CVP agricultural allocation for water contractors was set to 20 percent and the CVP M&I allocation finalized at 70 percent. Table 1-2.1 summarizes the year types and final allocations from the SWP and CVP to Valley Water for the last five years.

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[2] Rainfall at San José (City of San José gauge 6131) was approximately 8.85 inches or 62 percent of average for the rainfall season from July 1, 2019 to June 30, 2020.

[3] Precipitation data for rainfall year 2020-21 is provisional until verified by staff in Spring of 2021.

The early winter of 2020-2021 has been experiencing drier than average hydrology, and initial allocations are expected to be low. In December 2020, DWR set the initial SWP allocation for 2021 at 10 percent. The Bureau of Reclamation (Reclamation) has yet to set its initial CVP allocations for 2021.

Table 1-2.1 Statewide Water Year Types and Final Imported Water Allocations

Water Year	Year Type		Final allocations to Valley Water as % of contract amounts		
	Sacramento River	San Joaquin River	SWP	CVP	
				M&I	AG
2015-16	Below Normal	Dry	60%	55%	5%
2016-17	Wet	Wet	85%	100%	100%
2017-18	Below Normal	Below Normal	35%	75%	50%
2018-19	Wet	Wet	75%	100%	75%
2019-20	Dry	Dry	20%	70%	20%

Water Banking

To provide reliability in future years, Valley Water stores some of its imported water in groundwater storage outside of the county. This involves conveyance of Valley Water state and/or federal water supplies to a banking partner, another district that operates a groundwater conjunctive use program. Storage in the bank occurs when water is physically delivered to ponds to soak into the aquifer, or when surface water deliveries are used by the banking partner in lieu of groundwater pumping ("in-lieu recharge"). Return of stored water is accomplished when the banking partner uses groundwater in place of surface supplies, or physically pumps groundwater into the surface conveyance system for use by the Department of Water Resources for the SWP. Valley Water is then delivered imported water pumped from the Delta that would have otherwise been delivered to the banking partner or to other SWP contractors. Valley Water currently banks SWP and CVP water at the Semitropic Water Storage District in Kern County, where it has a contractual right to store up to 350,000 acre-feet of water. Table 1-2.2 shows the annual changes and year-end balances for banked water during calendar years 2018 and 2019, and the estimated activity for 2020.

Table 1-2.2 Water Banking for Calendar Years 2018 through 2020 (Acre-Feet)

Water Banking	**Actual 2018**	**Actual 2019**	**Estimated 2020***
SEMITROPIC WATER STORAGE DISTRICT			
Beginning Balance (January 1)	254,385	292,725	349,965
Valley Water Deposit or Withdrawal	+38,340	+57,240	-16,800
TOTAL BANKED ENDING BALANCE (December 31)	**292,725**	**349,965**	**333,165**

* *2020 deposit quantity from Semitropic being finalized*

Valley Water has contractual rights to deliver or “put” up to 31,675 acre-feet of water into the Semitropic groundwater bank each year. Valley Water is often able to deliver additional water by using the unused ”put” capacity of other agencies participating in the Semitropic groundwater bank. The maximum amount of water Valley Water delivered to Semitropic for storage in a single year was 89,022 acre-feet in 2005. Valley Water also has a contractual right to withdraw or “take” up to 31,500 acre-feet of water out of storage each year. The maximum amount of water that Valley Water can withdraw in any given year is dependent upon the SWP allocation and if the other bank participants have not made full use of their “take” capacity. The higher the SWP water supply allocation, the greater the “take” capacity. The largest amount of water previously withdrawn by Valley Water in a single year was 45,881 acre-feet in 2015. An estimated 16,800 acre-feet was withdrawn from Semitropic in 2020.

Reservoir Storage

Reservoir storage volumes in Lake Oroville, Shasta Lake, and Folsom Lake at the beginning of calendar year 2020 were 96, 118 and 107 percent of historic average beginning-of-year volumes, respectively. By the end of December 2020, those levels had decreased to 57, 72 and 61 percent of average. By February 1, 2021, the levels were at 54, 69 and 57 percent, respectively.

Locally, the 2020-21 water year started with Valley Water reservoirs at fairly low levels. October 1, 2020 total storage in these reservoirs was 55 percent of the 20-year average and 25 percent of capacity at the spillway crest.

Total storage in Valley Water reservoirs as of February 1, 2021 was 34 percent of the 20-year average and 17 percent of capacity. Storage restrictions are in place for half of Valley Water reservoirs. The combined storage in Valley Water reservoirs as of February 1, 2021 was at 44 percent of restricted capacity.

One of Valley Water's reservoirs, Anderson Reservoir, has undergone a series of increased storage restrictions. In a technical memorandum dated January 13, 2017, Valley Water's Anderson Seismic Retrofit consultant recommended restricting the Anderson Reservoir normal storage elevation by an additional 10 feet to Elev. 589.5 feet (NGVD 1929) for an interim period until construction of the Anderson Dam Seismic Retrofit Project. The Department of Water Resources, Division of Safety of Dams (DSOD) concurred with this proposal and, in a May 8, 2017 letter, set an interim reservoir operating restriction at Anderson Reservoir at the recommended elevation of 589.5 feet (NGVD 1929). This translates to a storage capacity of 51,766 AF.

On October 10, 2017, the Board directed staff to operate the Anderson Reservoir system through the winter of 2017-2018 following the 40 percent exceedance rule curve to reduce the chances of exceeding the seismic restriction of the reservoir. Staff continued to operate Anderson Reservoir following the 40 percent exceedance rule curve through the winters of 2018-2019 and 2019-2020.

On February 20, 2020, the Federal Energy Regulatory Commission (FERC) issued an order that as of October 1, 2020, Anderson Reservoir must begin to be safely drawn down to elevation 488 feet (NAVD 88[4]) corresponding to deadpool. Valley Water has complied with the order and Anderson Reservoir was at deadpool on October 1, 2020. Additionally, per the FERC order, Anderson Reservoir must be safely maintained at deadpool through completion of the Anderson Dam Tunnel Project (ADTP), a new, low-level outlet tunnel works that will allow Valley Water to more reliably and quickly draw down the reservoir, until directed otherwise by FERC. As of February 1, 2021, Anderson Reservoir remains at deadpool. Valley Water is also expected to implement Avoidance and Minimization Measures (AMMs), such as securing alternative water supplies and lessening the impacts to groundwater recharge, flooding hazards, and other environmental effects; these collective actions are considered the FERC Order Compliance Project (FOCP).

Groundwater Basins

As the Groundwater Sustainability Agency (GSA) for the Santa Clara and Llagas subbasins, Valley Water works to protect and augment groundwater through the activities described in this report to ensure continued sustainable conditions. The Santa Clara Subbasin is divided into two management areas: the Santa Clara Plain covering the urbanized, northern Santa Clara Subbasin and the more rural Coyote Valley (see location map in Figure 1-2.1). The Llagas Subbasin extends from the Morgan Hill area to the county's southern boundary. While surface-water reservoirs are a visible indicator of the local water supply, the majority of local reserves lie hidden beneath our feet in these large groundwater subbasins. Because the groundwater subbasins can store two times more water than all the local surface-water reservoirs combined, Valley Water strives to maintain adequate groundwater storage in wet and average years to ensure water supply reliability during dry periods or shortages.

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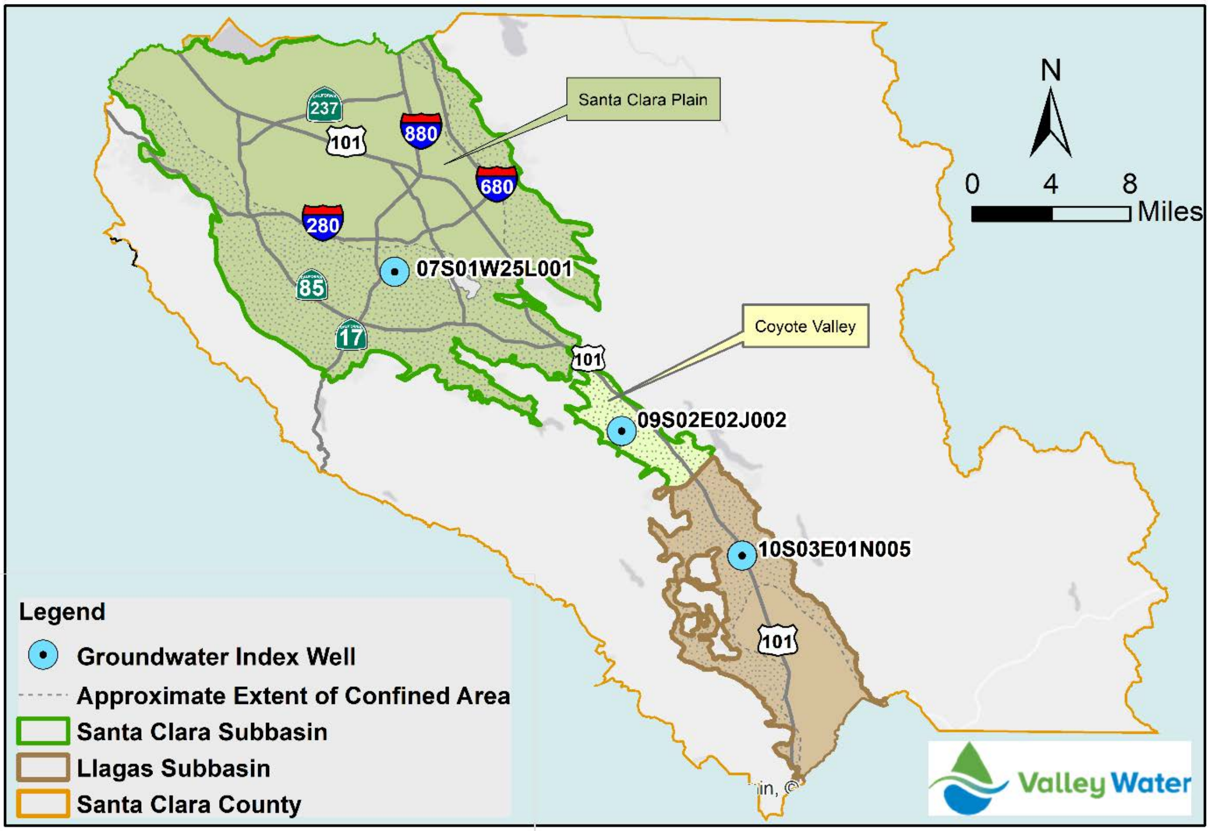
[4] 488 feet in the NAVD 88 datum corresponds to about 485.2 feet in the NGVD 29 datum.

Groundwater levels remained healthy in 2020 throughout the county, including at the three index wells that Valley Water uses to characterize general groundwater trends and conditions (see location map in Figure 1-2.1 and related hydrographs in Figures 1-2.2 through 1-2.4[5]). In 2020, water levels remained well above thresholds established to prevent renewed land subsidence[6]. Valley Water continues to closely monitor groundwater levels and land subsidence conditions.

Figure 1-2.1 Map of Index Well Locations



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[5] The previous index well for the Llagas Subbasin (10S03E13D003) was destroyed in 2019. The new index well is 10S03E01N005, which has a very similar water level history.

[6] To avoid additional permanent subsidence due to groundwater overdraft, Valley Water has established water level thresholds at ten index wells throughout the Santa Clara Plain. A tolerable rate of 0.01 feet per year of land subsidence was applied to determine threshold groundwater levels for these wells. Threshold groundwater levels are the groundwater levels that must be maintained to ensure a low risk of unacceptable land subsidence.

Figure 1-2.2 Santa Clara Plain Groundwater Elevations (Index Well 07S01W25L001)

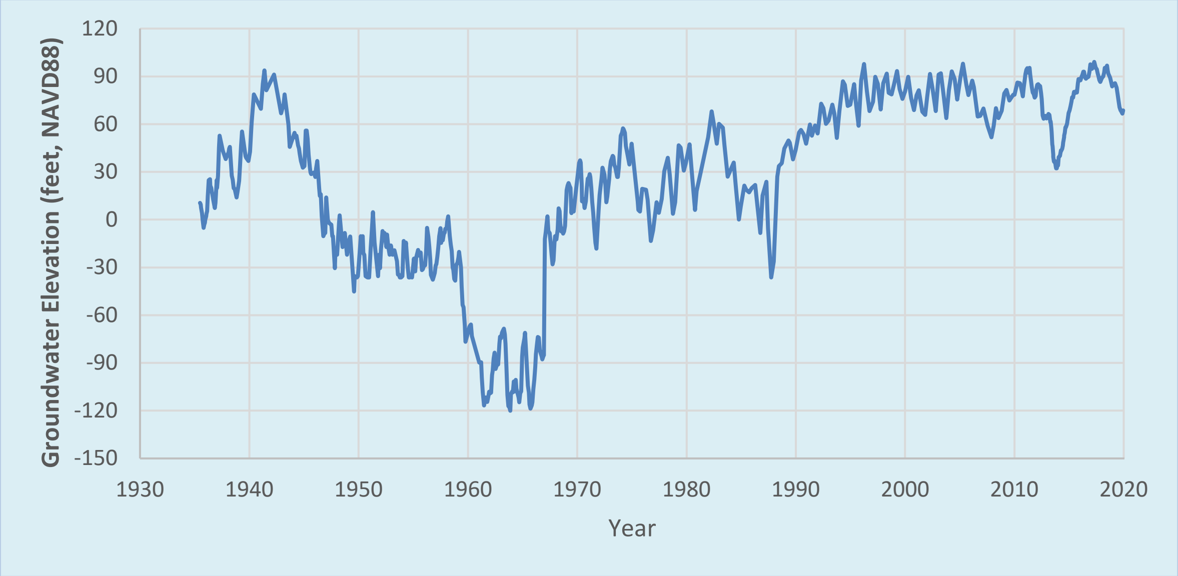


Figure 1-2.3 Coyote Valley Groundwater Elevations (Index Well 09S02E02J002)

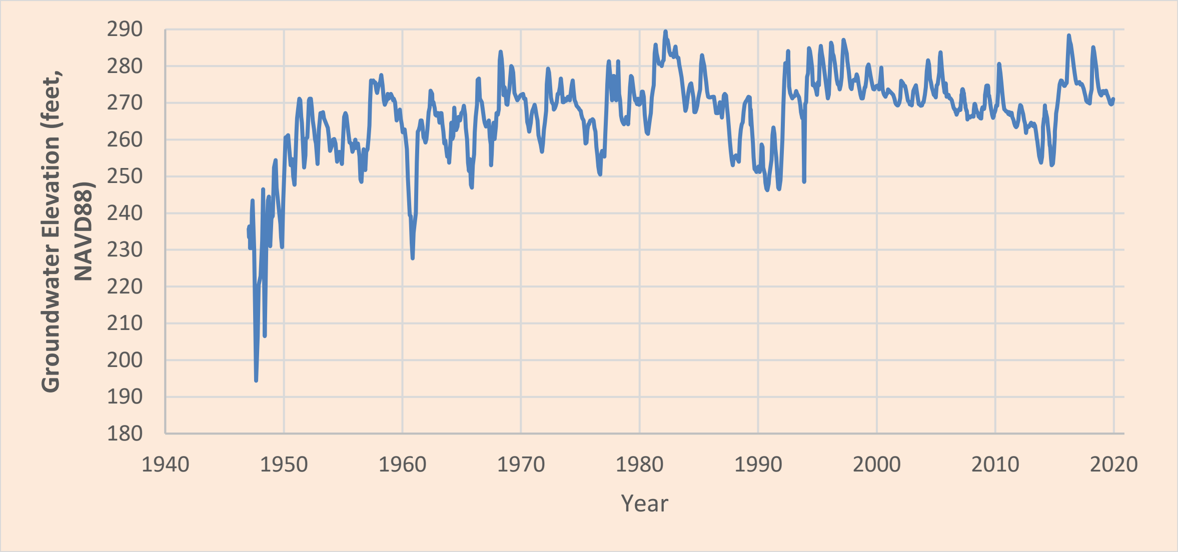
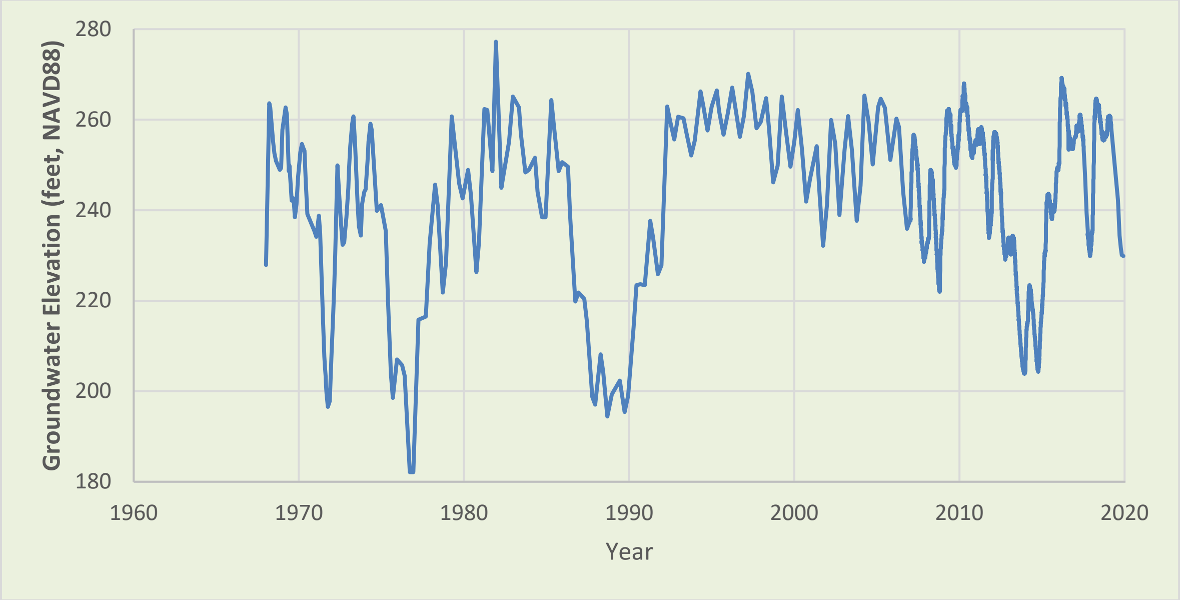


Figure 1-2.4 Llagas Subbasin Groundwater Elevations (Index Well 10S03E01N005)



Estimated groundwater storage in 2020 is about 27,000 AF less than in 2019, as shown in Table 1-2.3. However, the 2020 storage estimate of 331,000 acre-feet continues to be well above the groundwater sustainability outcome measure of 300,000 acre-feet. The healthy 2020 groundwater reserves can be attributed to continued water use reduction by the community, fair hydrologic conditions, and Valley Water's conjunctive management practices. Valley Water continues to closely track water supply conditions and modify operations accordingly. Monthly water supply conditions are summarized in Valley Water's Water Tracker, which is available on Valley Water's website[7]. A more detailed evaluation of groundwater conditions will be presented in Valley Water's annual 2020 groundwater report, which will include reporting on outcome measures related to groundwater storage, levels, quality, and subsidence.

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[7] The Water Tracker is available on Valley Water's website: https://www.valleywater.org/your-water/water-supply-planning/monthly-water-tracker.

Table 1-2.3 End-of-Year Groundwater Storage and Change in Storage

	Cumulative Groundwater Storage Estimates AF (acre-feet)		
	End of Year 2019	End of Year 2020	Change in Storage AF
Santa Clara Subbasin, Santa Clara Plain	316,000	296,000	-20,000
Santa Clara Subbasin, Coyote Valley	12,800	13,500	700
Llagas Subbasin	29,300	21,600	-7,700
Total	**358,100**	**331,100**	**-27,000**

Note: Storage estimates are refined as more pumping and recharge data become available.

Water Use Reduction

Valley Water's Water Shortage Contingency Plan evaluates the water use reduction needed based on projected end of year groundwater storage as shown in Table 1-2.4.

On February 25, 2014, mid-way through the 2012 to 2016 drought and following a reduced water supply outlook assessment for 2014 that included projected groundwater storage, Valley Water's Board set a preliminary 2014 water use reduction target equal to 20 percent of 2013 countywide water use. As conditions changed during the drought, the Board updated its call for water use reductions and provided recommendations to achieve savings in accordance with the water supply outlook and the Water Shortage Contingency Plan. The Board's most recent resolution adopted June 13, 2017 continues the call for a 20 percent reduction, clarifying that it is a voluntary call.

The estimated end of 2020 storage of about 331,100 acre-feet falls into the "Normal" stage, the first stage in our five-stage Water Shortage Contingency Plan. The five stages are shown in Table 1-2.4.

Table 1-2.4 Water Shortage Contingency Plan Action Levels

Stage	Title	Projected End-of-Year Groundwater Storage (Acre-Feet)	Suggested Short-Term Reduction in Water Use
1	Normal	Above 300,000	None
2	Alert	250,000 to 300,000	0 – 10%
3	Severe	200,000 to 250,000	10 – 20%
4	Critical	150,000 to 200,000	20 – 40%
5	Emergency	Less than 150,000	Up to 50%

Suggested short-term reductions in water use shown. Actual calls for water use reduction are subject to Board approval.

1-3 CURRENT WATER DEMAND

As mentioned above, in June 2017, the Board adopted a resolution calling for a voluntary 20 percent reduction in water use compared to 2013. Accordingly, estimated retailer water use in 2020 equates to a 16 percent reduction versus 2013. Imported water allocations, transfers, exchanges, and groundwater banking withdrawals brought approximately 149,710 acre-feet to meet 2020 demands.

To meet current and future demands, Valley Water continues to implement its long-term water conservation program. Water conservation is key to water supply reliability in Santa Clara County. It is an environmentally friendly and cost-efficient option that minimizes the need for new water supply projects and investments and minimizes groundwater pumping. With Valley Water's target of saving nearly 109,000 acre-feet of water per year by 2040 compared to 1992, the long-term conservation program offers technical assistance and a variety of incentives that achieve sustainable water savings. The program saved approximately 75,000 acre-feet in calendar year 2020.

Table 1-3.1 shows unadjusted water use in Santa Clara County. Figures 1-3.1 and 1-3.2 show a breakdown of groundwater production and managed recharge by water charge zone. Table 1-3.2 shows a historical summary of surface water supply, use and distribution for the last three years.

Table 1-3.1 Water Use in Santa Clara County for Calendar Years 2018-2020

Historical Calendar Year Water Use and Conservation	In Acre-feet[1]		
	Actual 2018	**Preliminary 2019**	**Estimated 2020**
Groundwater Pumped	118,500	108,500	130,700
Treated Water	108,200	102,000	102,900
Raw Surface Water Deliveries	2,100	1,900	2,200
SFPUC Supplies to Local Retailers[2]	46,300	48,200	49,000
San José Water Company Water Rights	8,200	16,400	3,700
Recycled Water	17,900	17,200	17,000
Total Water Use[3]	**301,200**	**294,200**	**305,500**
Conservation[4]	*71,351*	*74,198*	*76,000*
Estimated Total without Conservation	*372,551*	*368,398*	*381,500*

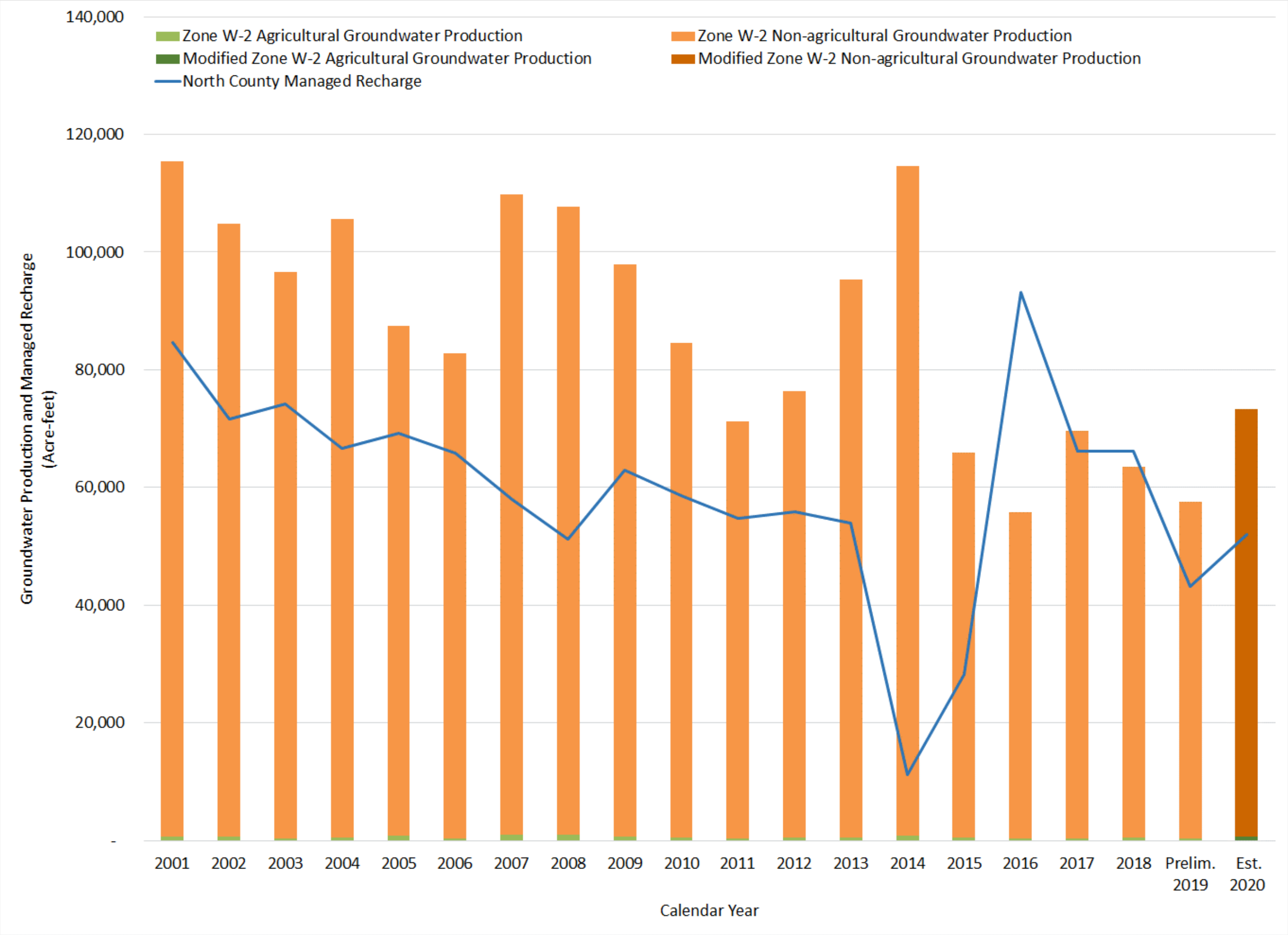
[1] *All values are rounded to the nearest hundred. Data is as of February 1, 2021 and may be subject to change.*

[2] *San Francisco Public Utilities Commission supplies to 8 retailers and NASA-Ames.*

[3] *Stanford has historically utilized between 200-1000 Acre Feet/Year of its water rights. This is not reflected in the table above.*

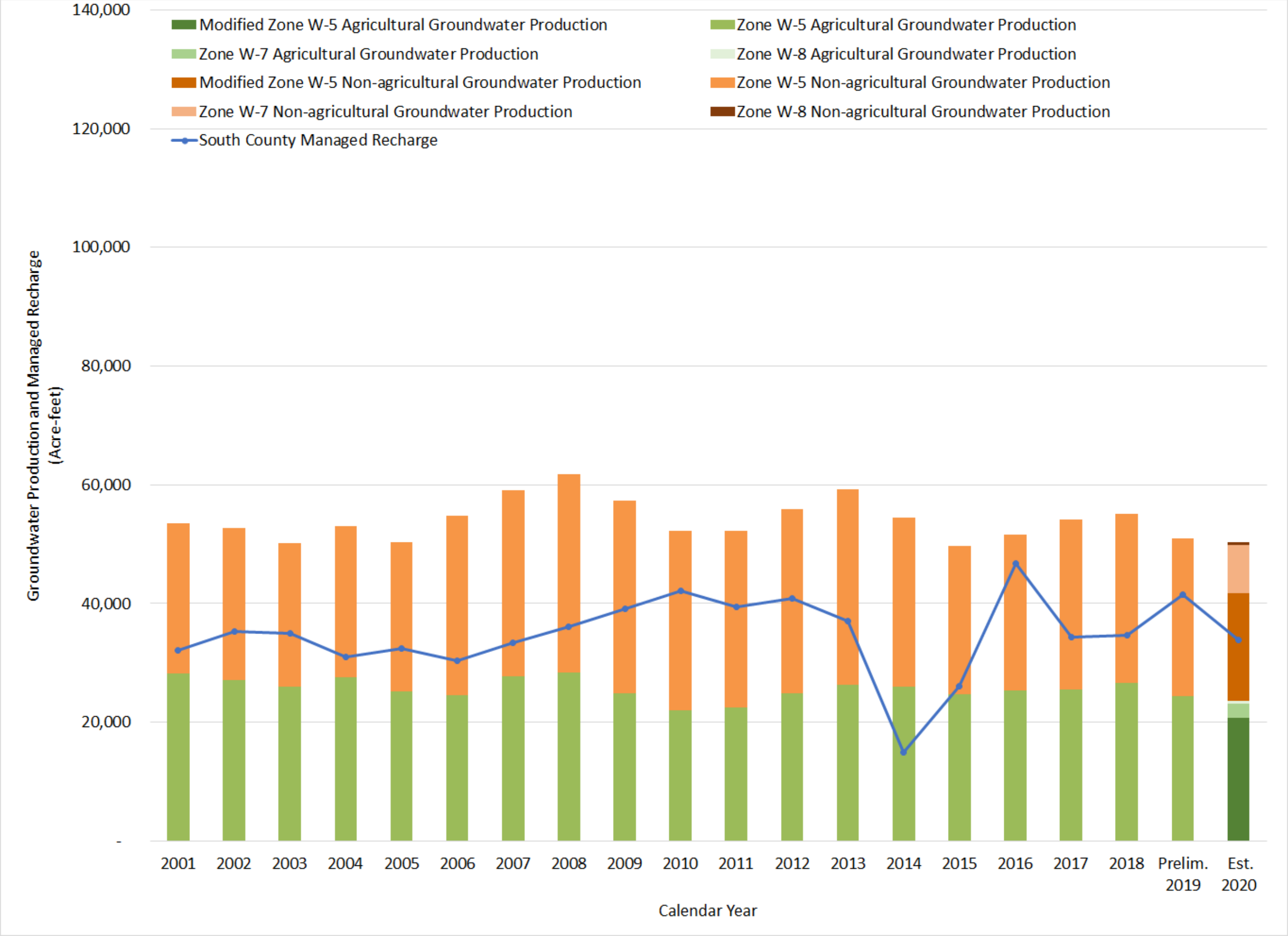
[4] *Conservation numbers are shown by fiscal year, as they are calculated using Valley Water's conservation tracking model which reports conservation by fiscal year.*

Figure 1-3.1 Groundwater Production and Managed Recharge in North County



Values are based on best available information and are refined as additional data becomes available. The Board adopted new groundwater benefit zones that went into effect on July 1, 2020. Groundwater production prior to 2020 reflects usage in the zones in effect at the time while 2020 production reflects the newly adopted zones. Managed recharge reflects the volume applied on the land surface; subsurface flow is not considered in the above graph.

Figure 1-3.2 Groundwater Production and Managed Recharge in South County



Values are based on best available information and are refined as additional data becomes available. The Board adopted new groundwater benefit zones that went into effect July 1, 2020. Groundwater production prior to 2020 reflects usage in the zones in effect at the time while 2020 production reflects the newly adopted zones. Managed recharge reflects the volume applied on the land surface; subsurface flow is not considered in the above graph.

Table 1-3.2 Historical Surface Water Supply, Use and Distribution for Three Previous Calendar Years

			Calendar Year, in Acre Feet		
			Actual 2018	Preliminary 2019	Estimated 2020
Valley Water Supplies					
Local Surface Water					
	Inflow	(net, minus evap)	33,600	227,210	21,660
	Surface Water Storage Releases (+) or additions to(-)		+2,420	-13,450	+34,450
Imported Water					
	Prior year carryover		73,580	9,720	40,590
	Delta flood flows		0	4,260	0
	State Water Project contract allocation		35,000	75,000	20,000
	Central Valley Project contract allocation		114,050	122,330	97,620
	Semitropic water bank withdrawals[1].		0	0	16,800
	Water transfers and exchanges[1].		16,880	8,780	15,290
	Returned to Valley Water from SFPUC via intertie		1,590	430	160
Total District Supplies:			**277,120**	**434,280**	**246,570**
Distribution of Valley Water Supplies					
	To groundwater recharge				
		Santa Clara Plain (Santa Clara Subbasin)	66,140	43,110	43,970
		Coyote Valley (Santa Clara Subbasin)	16,230	15,590	18,110
		Llagas Subbasin	18,410	25,880	19,000
	To treated water		108,210	102,010	102,930
	To surface water irrigation		2,140	1,930	2,240
	To environment		9,500	135,370	8,550
	To Semitropic water bank		42,600	63,600	0
	To imported water carryover for use in subsequent year				
		Used by Valley Water	9,720	40,590	50,070
		Returned to SWP/CVP	0	0	0
	To water transfers and exchanges		2,500	6,180	1,630
	Returned to SFPUC via intertie		1,670	20	70
Total Distribution of District Supplies:			**277,120**	**434,280**	**246,570**
Other Supplies					
San José Water Co. water rights[2].			8,210	16,370	3,730
Recycled water (including Valley Water)			17,850	17,180	17,030
SFPUC deliveries to retailers & NASA Ames			46,310	48,210	49,020
Total Other Surface Water Supplies			**72,370**	**81,760**	**69,780**
Total Managed Supplies:			**349,490**	**516,040**	**316,350**

Note: Numbers rounded to the nearest 10AF.

1. These values include supply secured in that year but may have been carried over to a future year.

2. Stanford has historically utilized between 200-1000 AFY of its water rights. This is not reflected in the table above.

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2

2020 PAWS REPORT

Future Water Demand and Water Supply Availability

2-1 OVERVIEW

As the water management agency and principal water wholesaler for Santa Clara County, Valley Water is responsible for planning (in collaboration with San Francisco Public Utilities Commission [SFPUC] and local retailers) the water supply of the county to meet current and future demands.

Water supply reliability includes the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that capture, store, transport, treat and distribute it. Valley Water strives to meet 100% of demands during normal times and request for no more than a 20% water use reduction during times of shortage, including satisfying its treated water contracts for deliveries to the retail water suppliers. As the groundwater manager for the county, Valley Water's goal is to protect and augment groundwater to ensure it is available both now and in the future.

Since water supplies available to the county are obtained from both local and imported sources, Valley Water's water supply is a function of the amount of precipitation that falls both locally and in the watersheds of Northern California. The supply available is also a function of the facilities in place to manage the supply. Sources of water supply in northern Santa Clara County (North County) consist of locally captured and managed water, recycled water, water imported by Valley Water via the SWP and the federal CVP, and supplies to some of the retail water suppliers from the SFPUC's regional water system (Hetch Hetchy and Bay Area watersheds). Southern Santa Clara County (South County including Coyote Valley and Llagas Subbasin) is supplied by locally developed and managed water, recycled water, and CVP water.

2-2 PROJECTED FUTURE WATER SUPPLY AVAILABILITY AND DEMAND

Near Term Water Supply Availability

Valley Water staff begins preparing Valley Water's Annual Water Supply Operations and Contingency Strategy for the upcoming calendar year in the fall of each year. The strategy is composed of numerous operations and water supply management scenarios that account for the probable range of water supply conditions that Valley Water can expect in the upcoming year. These variable conditions include precipitation, locally and in the Sacramento-San Joaquin Delta watershed, as well as allocations of imported supplies. Local precipitation and runoff impact our local reservoir storage, stream flow, and natural recharge of the groundwater basins. The quantity of precipitation in the Sacramento-San Joaquin Delta watershed and the timing of snowmelt impact Valley Water's imported water supplies that are conveyed through the Delta. Other factors that impact Valley Water's water supply include infrastructure and facility limitations; planned and unplanned facilities outages; contractual obligations; the ability to bring in banked Valley Water supplies from Semitropic Water Storage District; and regulatory, institutional, and legal constraints.

As described in Section 1 of the report, rainfall year 2020–21 began with a below average December in terms of local rainfall. Above-average precipitation materialized in the month of January. The Northern portion of California saw below-average precipitation at the onset of the rainfall year. The Northern Sierra 8-Station Precipitation Index total from the beginning of October through the end of January of 2021 was 14.1 inches, which is about 50 percent of the seasonal average to date and 27 percent of an average water year.

California Department of Water Resources announced an initial 2021 allocation of 10 percent. The Bureau of Reclamation has yet to set its initial CVP allocations for 2021. The initial allocations are subject to change as the water year progresses.

Local surface water supplies have been reduced because of the loss in Valley Water reservoir storage capacity due to regulatory restrictions to address seismic concerns. Regulatory restrictions at Anderson Reservoir, the largest Valley Water owned surface reservoir, have resulted in the loss of nearly all of its storage capacity.

Table 2-2.1 reflects the probable range of local and imported surface water supplies Valley Water currently expects in calendar year 2021. In conjunction with surface water supplies, groundwater reserves are managed to supplement available supplies during dry periods and to ensure that there are adequate supplies to meet current and future demand. The strategy will be continuously updated throughout the year to account for operations to-date and real-time conditions.

Table 2-2.1 Projected Calendar Year 2021 – Range of Surface Water Supply

Projected Calendar Year 2021 Supply in Acre-Feet		
	Average Year	Dry Year
Imported Water[1]	113,800 –131,800	85,300 – 86,300
Local Surface Water	50,600	15,700
Total	**164,400 – 182,400**	**101,000 – 102,000**

1. Imported Water Supplies are based on a range of SWP allocations provided during the January 25, 2021 State Water Contractors Water Operations meeting and CVP allocations that may possibly occur in an average or dry year. The average year projection assumes between 8-26% allocation for SWP, 25% allocation for CVP agriculture (Ag), and 75% allocation for CVP M&I. The dry year assumes between 4-5% allocation for SWP, 10% allocation for CVP Ag, and 60% for CVP M&I. Transfers, exchanges, banking, and carryover are not included as it is unknown at this point which of these supplies are needed for the upcoming year.

Long-Term Projected Demand and Water Supply

The long-term water supply and demand projections are based on analyses for the Water Supply Master Plan 2040 adopted in November 2019 and its associated Monitoring and Assessment Program (MAP), as well as Valley Water's and retailers' Urban Water Management Plans. The Water Supply Master Plan presents Valley Water's long-term water supply outlook without additional investments. It describes the type and level of investments Valley Water should make to provide a reliable supply of water, and includes the Monitoring and Assessment program to make sure Valley Water's investment strategy is on track by providing annual updates to the water supply and demand forecasts and tracking the progress of potential projects. The projections below include existing and planned investments, which are described further in Section 3.

Water Demand

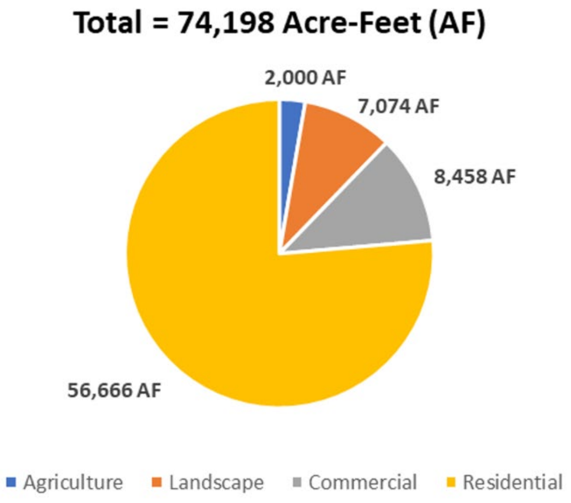
The Water Supply Master Plan 2040 demand forecast was developed during the 2012-2016 drought and Valley Water expected a full rebound in demands once the drought ended. However, a significant drought rebound has not yet materialized and there is not likely to be a rebound to pre-drought water use. Identifying the muted drought rebound, Valley Water updated demand forecasts through the Monitoring and Assessment Program and published the new forecasts in October 2020. The updated demand forecasts integrated the latest growth forecasts projected by the Association of Bay Area Governments and Metropolitan Transportation Commission Plan Bay Area 2017, which project that the population of the county will increase from nearly 2 million in 2020 to about 2.5 million by the year 2040. Jobs are projected to increase from about 1.1 million in 2020 to about 1.3 million in 2040. Even though per capita water use continues to decline, Valley Water estimates that increases in population and jobs will result in an increase in water demands from a current average of approximately 310,000 acre-feet to approximately 335,000 acre-feet in 2040. This forecast projection takes into account implementation of Valley Water's long-term water conservation programs but does not include short-term water use reductions that might be requested during a drought or other water shortage. Through the Monitoring and Assessment Program, current water use and growth will continue to be tracked by Valley Water to inform future adjustments to the demand forecasts, as needed.

Conservation

Valley Water and most major retail water providers partner in regional implementation of a variety of water use efficiency programs to permanently reduce water use in the county. Valley Water's long-term savings goal is to achieve 109,000 acre-feet per year in water savings by 2040. The Water Supply Master Plan 2040's "No Regrets" package includes water conservation programs designed to achieve this ambitious water savings goal, as well as stormwater capture/recharge programs. Additionally, the Water Conservation Act of 2009 required all retail water agencies in the state, with assistance from the water wholesalers, to reduce per capita water use 20 percent by 2020. Valley Water's long-term conservation programs successfully supported this effort, and countywide water use was 20 percent lower during 2014-2019 than in 2013. Additional water conservation requirements are being developed consistent with the State's "Making Conservation a California Way of Life" policy.

To achieve these aggressive long-term goals, Valley Water implements nearly 20 different ongoing water conservation programs that use a mix of incentives and rebates, free device installation, one-on-one home visits, site surveys, and educational outreach to reduce water consumption in homes, businesses and agriculture. Figure 2-2.1 shows Valley Water's conservation savings in the past Fiscal Year 2019-20 broken out by categories of Agriculture, Landscape, Commercial, and Residential. These programs are designed to achieve sustainable, long-term water savings and are implemented regardless of water supply conditions. Without these savings, the demands shown in Figure 2-2.2 would be substantially higher.

Figure 2-2.1 Long-Term Water Conservation Savings in FY 2019-20



Water Supply

Several sources of supply contribute to Valley Water's ability to meet future demands, including local surface water and natural groundwater recharge, recycled and purified water, supplies delivered to retailers by the SFPUC, and Delta-conveyed imported water supplies:

- **Local Surface Water and Natural Groundwater Recharge**
  Local surface water supplies are expected to increase over current levels after Valley Water completes seismic retrofits on several dams to be operated at full capacity. In addition, the stormwater capture projects in Water Supply Master Plan 2040's "No Regrets" package are projected to increase natural groundwater recharge. Valley Water is also considering constructing new groundwater recharge facilities, that would increase Valley Water's ability to recover groundwater storage rapidly after a drought.

- **Recycled and Purified Water**
  Recycled and purified water is a local, reliable source of supply that helps meet demands in wet, normal and dry years. Recycled and purified water use is expected to increase in the long-term. Valley Water's 2015 Urban Water Management Plan estimates that approximately 33,000 acre-feet of year (AFY) 2040 demands will be met with non-potable recycled (NPR) water. Valley Water's Board has set an objective to meet at least 10 percent of the county's total water demands using recycled and purified water. To help achieve this objective, Valley Water is developing a Countywide Water Reuse Master Plan (CoRe Plan) in collaboration with recycled water producers, wholesalers, retailers, and other interested stakeholders that will include evaluation and recommendation of potable reuse projects to produce (in addition to the 33,000 AFY of NPR) up to 24,000 acre-feet per year of potable reuse (purified water) consistent with Water Supply Master Plan 2040. In the near-term, the Board has directed Valley Water staff to proceed with a smaller size plant based on decrease water demand projections. A recent significant step towards this target is an agreement executed in December 2019 with the cities of Palo Alto and Mountain View whereby Valley Water secured an option to receive over 10,000 acre-feet per year of treated wastewater from the Palo Alto Regional Water Quality Control Plant for an extended period – up to 76 years from the date of execution. Efforts are underway for a similar source water agreement with the Cities of San José and Santa Clara. Per direction from the Valley Water Board of Directors in 2020, staff has begun preliminary California Environmental Quality Act (CEQA) work to support a Public-Private Partnership (P3) process to build an Indirect Potable Reuse (IPR) project with an annual yield of 11,200 AFY (or 14,000 AFY depending on availability) delivered to the Los Gatos Recharge System in either San José or Palo Alto.

Building on the Success of Existing Partnerships

To achieve water reuse goals, Valley Water is building on its partnerships with four non-potable reuse systems in the County, referred to as our Partner Agencies, to integrate existing plans and infrastructure. The Partner Agencies include:

1) Palo Alto/Mountain View Recycled Water System (RWS). Valley Water is working with Palo Alto and Mountain View to evaluate water reuse alternatives, including planned construction of a 1.25 to 2.5 million gallons per day Advanced Water Purification Facility (AWPF) near the Palo Alto Regional Water Quality Control Plant to reduce salinity of recycled water, and future collaboration for a potential larger regional AWPF to produce purified water for future potable reuse (see above).

2) South Bay Water Recycling (SBWR). SBWR receives tertiary treated recycled water from the San José/Santa Clara Regional Wastewater Facility (RWF). The RWF produces recycled water for SBWR to sell to retailers, including the City of San José, City of Milpitas, San José Water Company, and the City of Santa Clara. In 2014, Valley Water collaborated with the City of San José in creating the Silicon Valley Advanced Water Purification Center, which produces purified water which is added back into the SBWR system to improve water quality.

3) South County Regional Wastewater Authority (SCRWA). In 1999, SCRWA partnered with Valley Water to create a master plan and capital improvement program and agreed that Valley Water would sell wholesale recycled water produced by SCRWA. Valley Water has also partnered with various partners such as developers and other potential recycled water users in the Gilroy area to construct new pipelines and extend the South County RWS.

4) Sunnyvale RWS. Starting in 2013, Valley Water partnered with Sunnyvale on the Wolfe Road pipeline design and construction. The completed pipeline delivers recycled water from the RWS to Apple Inc. in Cupertino, with Valley Water as the wholesaler and California Water Company as the retailer. Valley Water and Sunnyvale are jointly evaluating additional potable water reuse alternatives, including an AWPF near the Sunnyvale Water Pollution Control Plant.

- **San Francisco Public Utilities Commission (SFPUC)**
  SFPUC water supplies to common retailers reduce demands on Valley Water supplies in northern Santa Clara County. Most of the common retailers have supply guarantees from SFPUC that are not expected to change over time. However, two retailers (the City of San José and the City of Santa Clara) have interruptible contracts. If the SFPUC interrupts supplies to these retailers, there could be additional demand for Valley Water supplies.
  An intertie facility between Valley Water and SFPUC provides a backup supply of healthy, clean drinking water to the residents of Alameda and Santa Clara Counties in an emergency or when planned maintenance activities require supplemental water supply from one agency to the other.

- **Delta-Conveyed Imported Water**
  Valley Water holds contracts with the California Department of Water Resources and U.S. Bureau of Reclamation for up to 252,500 AF per year of supplies, with actual deliveries subject to availability of water supplies and the satisfaction of regulatory constraints to protect fish, wildlife, and water quality. These Delta-conveyed imported water deliveries from the SWP and CVP have been negatively impacted by significant restrictions on Delta pumping required by biological opinions and permits issued by the U.S. Fish and Wildlife Service (FWS, October 2019), National Marine Fisheries Service (NMFS, October 2019), and California Department of Fish and Wildlife (CDFW, 2020) and by water rights permit conditions imposed by the State Water Resources Control Board (Decision-1641, 1999).

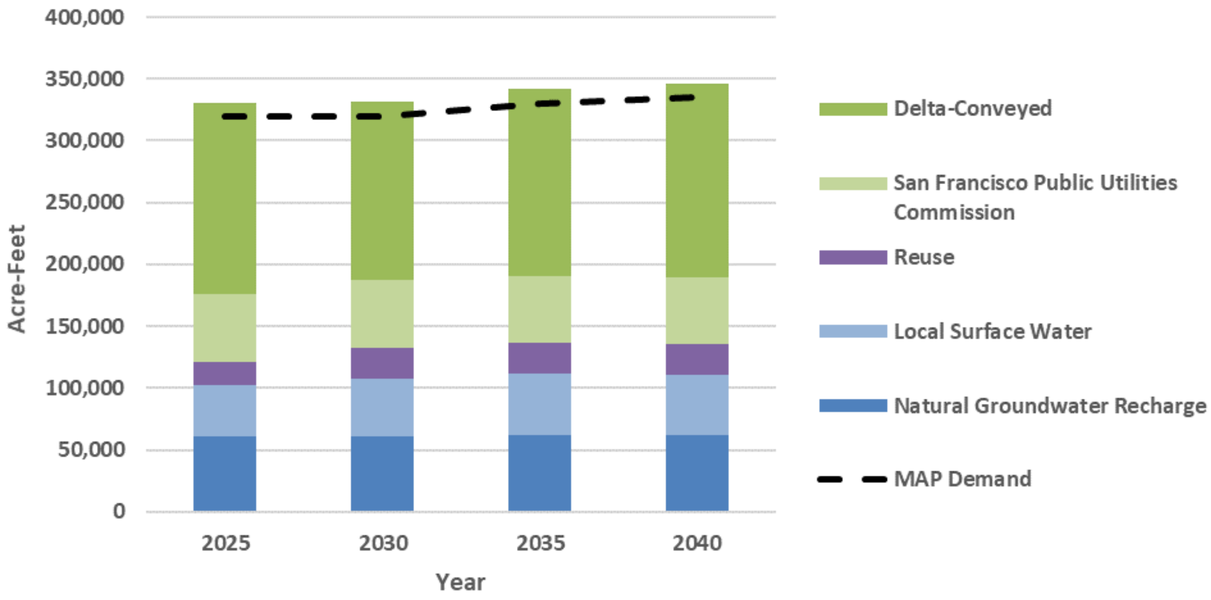
Based on modeling projections provided by the California Department of Water Resources, future average imported water deliveries could decrease with additional regulatory restrictions and impacts from climate change. On September 24, 2019, the Valley Water Board of Directors adopted a resolution that expresses support for Governor Newsom in his development of a single-tunnel Delta Conveyance Project and adopted Guiding Principles to shape Valley Water participation in the project.

Valley Water is also considering investing in the Los Vaqueros Reservoir Expansion Project, including the proposed Transfer-Bethany Pipeline, which could provide flexibility in how Valley Water stores and receives Delta-conveyed supplies. Additionally, in November 2018, the Valley Water Board of Directors approved the contracting of two consultant firms to assist us in moving forward with planning and design efforts for Pacheco Reservoir, which would provide flexibility in storing Delta-conveyed supplies for use during drier years.

Valley Water’s diverse water supply portfolio provides resilience and operational flexibility to the water supply system under a range of climatic and operational conditions. Water Supply Master Plan 2040 identifies a diverse suite of cost-effective projects that could improve the system resilience and operational flexibility. In particular, the Delta Conveyance Project and the “No Regrets” package aim to minimize the cost associated with meeting future demands. The “No Regrets” package provides resilience to droughts and other water shortage emergencies. Valley Water also participated in developing two Stormwater Resources Plans that cover all of Santa Clara County – one for the Llagas sub-basin area that covers southern Santa Clara County and one for the South Bay that covers northern Santa Clara County. Repairing and maintaining existing infrastructure, as well as planned investments in the Transfer Bethany Pipeline and the Pacheco Reservoir Expansion, help Valley Water maintain operational flexibility into the future. Valley Water is also developing three water supply implementation projects, which will provide project recommendations to ensure Valley Water’s existing infrastructure is effectively maintained to respond to future water supply needs. Moreover, repairing and maintaining the existing infrastructure minimizes the number of new projects Valley Water needs to invest in to meet future demands.

Figure 2-2.2 shows projected average supplies and demands through year 2040. The projection assumes existing supplies and infrastructure are maintained and that the projects approved for planning through Water Supply Master Plan 2040 adoption and reinforced through the Board’s decision to include those projects in the PAWS rate projections in January 12, 2021 Board meeting are implemented, including the “No Regrets” package, potable reuse, the Transfer Bethany Pipeline portion of the Los Vaqueros Reservoir Expansion Project, the planned Pacheco Reservoir Expansion, and the Delta Conveyance Project. In this case, average water supplies appear to be sufficient to meet future water demands through 2040. The Water Supply Master Plan 2040 forecasted a full rebound in demand after the 2012-2016 drought, which has not materialized. Through MAP, Valley Water updated the demand projections in consideration of the muted demand rebound from the drought. The projects approved for planning combined with the reduced demands provide Valley Water flexibility to respond to climate change uncertainties and future regulatory, institutional, and legal constraints. If these projects are not fully implemented, or if other risks or uncertainties are realized (i.e., demands increasing more than what is projected), additional water supply and/or demand reduction projects may be needed. Additional projects that Valley Water are evaluating can be found in Appendix B of Water Supply Master Plan 2040.

Figure 2-2.2 Projected Average Supply & Demand Comparison, Santa Clara County



The Delta Conveyance Project is not included in the modeling evaluation because model information is not yet available. However, the Delta Conveyance Project is expected to help maintain the imported water supplies delivered to Valley Water.

Reserves

Santa Clara County, like most of California, experiences drastic variation in annual precipitation. The variable precipitation causes annual fluctuations in water supply availability. Annual supplies can exceed demands in some years, while demands can greatly exceed supplies in other years. As part of its conjunctive management program, Valley Water prepares for this supply variability by storing excess wet year supplies in the local groundwater basins, local reservoirs, San Luis Reservoir, and the Semitropic Groundwater Bank. Valley Water draws on these reserve supplies during dry years to help meet demands. These reserves are generally enough to meet demands during a single critically dry year or the initial years of an extended drought. Based on analyses conducted as part of the Water Supply Master Plan 2040, Valley Water anticipates that supplies would be sufficient to meet at least 80 percent of demands during an extended drought with full implementation of the water supply investments in water conservation, stormwater capture, potable reuse, and imported supplies that the Board has approved for planning.

2-3 CONCLUSIONS, FINDINGS AND CHALLENGES TO FUTURE WATER SUPPLY AVAILABILITY

Future Water Supply Reliability

Water Supply Master Plan 2040 is Valley Water's long-term strategy for providing a reliable, cost-effective water supply for Santa Clara County's municipalities, industries, agriculture, and for environmental purposes. The strategy has three core elements: 1) secure existing supplies and infrastructure, 2) increase water reuse and conservation, and 3) optimize the use of existing supplies and infrastructure. Through the Monitoring and Assessment Program, Valley Water will track the progress of implementing the Water Supply Master Plan 2040 and recommend adjustments as needed to ensure Valley Water continues to provide Santa Clara County a reliable, cost-effective water supply. Valley Water must secure existing supplies and facilities for future generations because they are, and will continue to be, the foundation of our water supply system. Valley Water is also committed to working with stakeholders to meet future changes in water demand through conservation, reuse, and other drought-resilient strategies. Finally, Valley Water has opportunities to make more effective use of its existing assets by developing storage and conveyance flexibility. By balancing water supply investments and working with stakeholders, Valley Water can provide a reliable water supply for Santa Clara County under normal and drought conditions and respond to future challenges and risks.

Future Challenges and Risks

Droughts

The unpredictable nature of droughts makes them Valley Water's greatest water supply challenge. Single year droughts can impact Valley Water's ability to maintain a groundwater recharge program. Multi-year droughts deplete reserves and can result in groundwater level declines and the risk of land subsidence. Valley Water's conjunctive management program minimizes this risk but needs to be supported with continued investments in Valley Water's existing water supply system, increased water conservation, and the expansion of recycled and purified water. In addition, use of Valley Water's water shortage contingency plan also supports Valley Water's conjunctive management program during droughts.

Imported Water Supplies

Imported water supplies are at risk from increased regulatory restrictions, Delta levee failure, and impacts of climate change, including sea level rise and changing precipitation patterns. These risks could impact not only Valley Water's supplies but those of SFPUC as well. To mitigate these risks and improve the reliability of its imported water supplies, Valley Water participates with state and federal agencies, other water contractors, and environmental organizations in long-term planning efforts to improve Delta conveyance and restore ecosystem health. The goals of these planning efforts are to protect and restore both water supply reliability and the ecological health of the Delta and its tributaries. On May 8, 2018 and November 17, 2020, Valley Water voted to participate in planning for new Delta conveyance infrastructure and is now working with the state and water agency partners in support of a project that will meet the needs of the county.

The State Water Resources Control Board (SWRCB) approved amendments to the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) in December 2018 that will result in increased restrictions on water users within the San Joaquin Basin (Basin), potentially reducing SFPUC supplies. SWRCB staff are working with Basin stakeholders to develop voluntary agreements that will achieve an equivalent level of environmental protection while reducing impacts on water supplies. If these voluntary agreements are not developed and adopted by the SWRCB as an alternative to the December 2018 approved changes and the objectives in the recently approved plan are implemented, SFPUC supplies to Santa Clara County retailers will likely be reduced, which could increase demand for Valley Water supplies. Valley Water will continue to work with state officials and other agencies to address these concerns.

Climate Change

Future climate projections for the Southwestern U.S. and California generally indicate increasing temperatures, increasing storm severity, shifting seasonal and annual precipitation patterns, and increasing drought severity. Each of these climatic changes can impact the reliability of our local and imported water supplies. Moreover, reduced Sierra Nevada snowpack and increased San Francisco Bay sea level rise will likely affect imported water deliveries. Valley Water’s water supply strategy helps adapt to future climate change by managing demands, providing drought-resilient supplies, and increasing system flexibility.

Other Risks and Uncertainties

Other risks and uncertainties to water supply include: fisheries protection measures, random occurrences of hazards and extreme events resulting in local and/or imported water outages, more stringent water quality standards, water quality contamination, SFPUC changes in contracts with local water retailers, seismic restrictions on local reservoirs, and demand growth different than projected.

Investment Needs

Valley Water manages and addresses risks and uncertainties by building and maintaining an integrated and diverse water supply system. The water supply system that exists today will continue to meet most of the county’s future water needs and is the foundation of future water supply investments. Thus, securing existing water supplies and infrastructure is critical to water supply reliability. Valley Water needs to continue to be vigilant in protecting the groundwater basins from overdraft and contamination, mitigating risks to imported and local supplies, expanding water conservation and water reuse, and maintaining and replacing the aging water supply infrastructure. These infrastructure investment needs will be further discussed in Section 3 of this report.

Future Water Demand and Water Supply Availability

Water Supply Master Plan 2040's Monitoring and Assessment Program provides a planning mechanism for adapting to changing supply and demand conditions, climate change, regulatory and policy changes, other risks, and uncertainties. Through regular annual monitoring of specific projects and overall conditions, Valley Water will assess whether changes to Water Supply Master Plan 2040's strategies or projects may be needed. Alternative projects will be evaluated based on their impacts to the water supply reliability level of service, costs, relationships with other projects, risks and opportunities, and stakeholder input. Any changes to Water Supply Master Plan 2040 will be reflected in this annual report, as well as the Capital Improvement Program and budget.

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3-1 ACTIVITIES TO PROTECT AND AUGMENT WATER SUPPLIES OF VALLEY WATER

Groundwater production charges and other water charges finance a program of activities to protect and augment water supplies of Valley Water. The program is comprised of activities and service functions in the areas of operations, maintenance, and construction, as illustrated in Table 3-1.1. These activities are designed to work together to meet Valley Water's Board-adopted end goals and policies as well as to provide benefits to the community.

Table 3-1.1 Program Activities to Manage and Provide a Sustainable Water Supply

Activities to Protect & Augment Water Supplies		End Goals & Benefits
	Services and Functions	• Reliable, clean water supply for current and future generations • Delivery of reliable high-quality drinking water • Sustainable water supply through integrated water management • Assets and resources managed for efficiency and reliability • Healthy, safe and enhanced quality of living in Santa Clara County
Operation	• Planning & development • Water purchases • Transmission • Treatment • Distribution • Storage • Groundwater recharge • Conservation & water recycling • Regulatory compliance and mitigation	
Maintenance	• Surface water & groundwater resources protection & management • Asset protection & management	
Construction	• Capital improvement • Infrastructure management	

Revenue from groundwater production charges and treated water charges constitute the majority of funds needed to finance the operations costs of the Water Utility. About a third of the operating budget[8] is needed for imported water purchases to augment local supplies. About a quarter of the operating budget is needed to provide treated water to augment groundwater supply in meeting water demand. The balance is used to provide program services including conjunctive management and protection of surface and groundwater resources, operation and maintenance of facilities, water conservation, planning and development of recycled water and other alternative sources of supply, as well as administrative and support services.

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[8] The budget document is available on Valley Water website: www.valleywater.org.

Valley Water managed water use is a key driver of Valley Water's water revenue. For FY 2019-20, Valley Water managed water use is estimated at 232,000 acre-feet, which is higher than the prior year actual of 216,000 acre-feet. Water usage for FY 2020-21 is anticipated to be 230,000 acre-feet and is projected at 232,000 acre-feet for FY 2021-22.

Groundwater levels and storage remain at normal, pre-drought levels. Valley Water was able to meet treated water demands with safe clean drinking water that met or exceeded all regulatory requirements in FY 2019-20. The Board continues to call for a voluntary 20 percent reduction in water use and accordingly, Valley Water continues to adjust contracted water deliveries to 90 percent of the originally contracted amount. Water conservation program services and outreach activities were significantly enhanced during FY 2014-15 and 2015-16 in response to the drought but were reduced back to pre-drought funding levels for FY 2016-17 through FY 2019-21. The estimated FY 2021-22 budget is $6 million.

The asset management program and maintenance activities continued, including work at Valley Water's water treatment plants, pipelines, and pump stations. Valley Water is also developing three water supply implementation projects to provide recommendations on how to ensure existing infrastructure is maintained and updated to meet current and future demands.

In September 2019, the Board adopted 8 guiding principles for participation in the Delta Conveyance Project, revising the guiding principles previously adopted in October 2017 for the California WaterFix, to ensure that Santa Clara County's interests are represented in Delta Conveyance discussions. The Board anticipates that participation in the project will improve the reliability and water quality of its supplies conveyed through the Delta, and that the project will provide an alternative conveyance pathway that is more protective of Delta fisheries. Valley Water staff are also supporting the state's EcoRestore program, which will contribute towards a sustainable Delta ecosystem.

Valley Water is involved in three Proposition 1 Water Storage Investment Program (WSIP)-funded projects – Pacheco Reservoir Expansion, Sites Reservoir, and Los Vaqueros Reservoir Expansion. Proposition 1 WSIP dedicated $2.7 billion for investment in new water storage projects and the California Water Commission announced conditional funding awards in July of 2018[9]. The planned Valley Water-led Pacheco Reservoir Expansion has been conditionally awarded the full $484.5 million requested, which also includes an early funding award of $24.2 million. The California Water Commission also conditionally awarded the Sites Reservoir Project $816.4 million (including $40.8 million in early funding)

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[9] As of February 2021, Valley Water received notification that conditional award amount may be increase slightly due to reallocation of funding between WSIP award recipients.

and the Los Vaqueros Reservoir Expansion project $459 million (including $13.7 million in early funding). Both the Sites Reservoir and Los Vaqueros Reservoir Expansion Projects, the latter including the proposed Transfer-Bethany Pipeline conveyance facility, are pending Board of Directors' decision(s) on long-term project involvement by Valley Water.

3-2 FUTURE CAPITAL IMPROVEMENT, OPERATING AND MAINTENANCE REQUIREMENTS

The highest priority work of Valley Water's Water Utility, now and into the future, is to implement a program of activities to ensure reliable water supplies both for today, as well as the decades ahead, to protect local surface water and groundwater supplies, and to meet treated water quality standards. This program of operations, maintenance and capital improvement activities will require continued funding from groundwater production charges and other sources of revenue, as described in Section 4 of this report.

The proposed FY 2021–22 operations and capital programs, as shown in Tables 4-5.1 and 4-5.2 respectively, continue to emphasize activities to protect and maintain existing water supplies and assets, and to plan for uncertainties including hydrologic conditions and regulatory restrictions on imported and local supplies. This is consistent with Valley Water's long-term water supply strategy, described in Water Supply Master Plan 2040, to 1) invest in existing supplies and infrastructure, 2) increase water reuse and conservation, and 3) optimize the use of existing supplies and infrastructure. Thus, the proposed programs, if funded accordingly, will enable the Water Utility to provide reliable water supplies in the next year as well as in the future.

The current capital program is composed of seismic retrofit, recycled water, surface water storage expansion, and asset renewal and improvement projects. Maintaining existing assets provides the foundation for meeting current and future supply needs. Fiscal Year 2021-22 will be Year 5 for Valley Water's 10-Year Pipeline Inspection and Rehabilitation Program to assess and remediate conditions of critical transmission and distribution pipelines.

The seismic stability evaluations of Anderson, Almaden, Calero, Lenihan, Stevens Creek and Guadalupe Dams have been completed. The four resulting CIP projects (for Anderson, Almaden, Calero and Guadalupe Dams) contain several unique construction elements. In case of Anderson Dam, Valley Water has identified several separate construction elements including Cross Valley Pipeline Extension, Coyote Percolation Dam Replacement, Coyote Creek Flood Management Measures and installation of Chiller Units as Coyote Creek Fish Protection Measures that are budgeted and currently in the design phase. The seismic stability evaluation for three remaining dams, Coyote, Chesbro and Uvas, was initiated in the fall of 2014; the findings may require seismic retrofit work at these locations in the future. In addition to seismic retrofit improvements at four of the above-listed dams, the conditions of the outlet system, and the adequacy of the spillway and freeboard are being evaluated and will be incorporated into the retrofit work as appropriate.

With operating restrictions on several Valley Water dams due to seismic deficiencies or questions about seismic adequacy, there may be impacts to current and future operating budgets, such as the need to purchase additional water because of an inability to capture and utilize local runoff or store imported water.

Valley Water is also looking to make significant investments to expand local surface water storage. In conjunction with the San Benito County Water District and Pacheco Pass Water District, Valley Water continues planning efforts on the expansion of the existing Pacheco Reservoir on the North Fork Pacheco Creek in south-east Santa Clara County. The reservoir is located 60 miles southeast of San Jose and sits north of Highway 152. The expanded reservoir would increase the reservoir's capacity from 5,500 acre-feet to up to 140,000 acre-feet, enough water to supply 1.4 million residents for a year. The planned Pacheco Reservoir Expansion would provide a number of benefits including: reducing the frequency and severity of water shortages, increased emergency water supplies, improved water quality, ecosystems benefits through our region and in the Sacramento – San Joaquin Delta, and improving habitat for the threatened steelhead population.

To help secure existing imported water supply, Valley Water has been engaged in planning efforts to improve the conveyance of SWP and CVP supplies across the Delta since 2006, recognizing that the current approach of diverting directly from rivers in the vulnerable southern end of the Delta is unsustainable. Plans to improve Delta conveyance evolved from development of the Bay Delta Conservation Plan to the California WaterFix, and finally to Governor Newsom's Delta Conveyance Project.

In September 2019, Valley Water adopted guiding principles for participation in the Delta Conveyance Project and on November 17, 2020, Valley Water Board of Directors adopted a resolution to approve a provisional participation percentage in the Delta Conveyance Project of 2.73 percent and authorize the CEO to increase Valley Water's provisional participation percentage up to a total of 3.23 percent if additional shares become available. Additional shares became available and Valley Water increased its provisional participation rate to 3.23 percent.

The Governor's Delta Conveyance Project has the potential to improve Valley Water's water supply reliability while improving the flexibility of our infrastructure to respond to environmental conditions in the Delta to avoid fishery impacts. Over the long term, the project could improve water supply reliability in the face of climate change effects, including salinity intrusion from levee failures and sea level rise, and improve access to transfer supplies, improve water quality, and enhance the benefit of storage projects.

Dam seismic retrofits, the Rinconada Water Treatment Plant reliability improvements and other aging infrastructure renewal projects comprise the bulk of planned expenditures in the current capital program. Some highlights of the proposed FY 2021–22 capital program are listed next.

Storage:

- Seismic retrofit of Anderson Dam
- Seismic evaluations of Coyote, Chesbro and Uvas Dams
- Pacheco Reservoir Expansion

Transmission:

- Raw and treated water pipeline inspection and rehabilitation
- Vasona Pumping Plant Upgrades
- Almaden Valley Pipeline Replacement

Water Treatment Plants:

- Continued construction for the comprehensive makeover of the Rinconada Water Treatment Plant processes to ensure plant reliability for the next 50 years; this will include the addition of fluoridation facilities.
- Rinconada Water Treatment Plant Residuals Remediation
- Santa Teresa Water Treatment Plant Filter Media Replacement

Recycled and Purified Water:

- The development of the CoRe Plan, currently underway, will identify potential projects to produce up to 24,000 acre-feet per year of purified water for indirect potable reuse (IPR).
- Expansion of the recycled water pipeline system in Gilroy to increase non-potable water reuse by 2,000 to 3,000 acre-feet per year by 2040.

Detailed cost projections for the preliminary FY 2022–26 Capital Improvement Program (CIP) can be found in Section 4-5.

The Fish and Aquatic Habitat Collaborative Effort (FAHCE) is expected to have an impact on future operating and capital budgets. It was established to address a water rights complaint after the 1996 listing of steelhead trout as a threatened species under Federal Endangered Species Act (ESA)[10] by

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[10] The Endangered Species Act (ESA) is a federal law to ensure the conservation of threatened and endangered plants and animals and the habitats in which they are found. The ESA prohibits “take” of listed species through direct harm or destruction or adverse modification of designated critical habitat of such species. In the 1982 ESA amendments, Congress authorized the federal ESA implementing agencies, U.S. Fish and Wildlife Service and National Marine Fisheries Service, through the Secretary of the Interior, to issue permits for the “incidental take” of listed species before permittees could proceed with an activity that is legal in all other respects but would result in the incidental taking of a listed species. Prior to issuance of “take” permits, permit applicants are required to design, implement, and secure funding for a conservation plan that minimizes and mitigates harm to the impacted species during the proposed project. That plan is commonly called a Habitat Conservation Plan (HCP). HCPs are legally binding agreements between the U.S. Secretary of the Interior or Commerce and the permit holder.

The California Endangered Species Act (CESA) is the state equivalent of the federal ESA. It states that all native species and habitats of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. CESA also allows for take incidental to otherwise lawful development projects. The state Department of Fish and Wildlife is the CESA implementing agency, authorized to issue permits and memorandum of understanding.

National Marine Fisheries Service (NMFS). In 2003, a settlement agreement was initialed by parties involved. Preparation of the FAHCE Fish Habitat Restoration Plan (FHRP) and associated environmental impact report is necessary to complete the water rights change petitions, resolve the water rights complaint and address issues raised in the 2003 Settlement Agreement. Once water rights change

petitions are processed, the operation and maintenance of Valley Water's Water Utility Enterprise facilities, including water diversions in the Guadalupe River, Coyote Creek and Stevens Creek watersheds (Three Creeks) will be modified. Further, fish habitat restoration measures specified in the FHRP will be implemented.

To support environmental permitting for the Anderson Dam Seismic Retrofit (ADSR) Project, restoration measures for Coyote Creek watershed originally contained in the Three Creeks Fish Habitat Restoration Plan will be transferred to the ADSR Project's environmental review and permitting process. Completing the FHRP, early implementation of restoration measures, pilot projects and monitoring and adaptive management will represent an unavoidable cost of distributing, recharging, and using water diverted from the Three Creeks into Valley Water's groundwater zones, and of maintaining and operating related Valley Water facilities. Moreover, those who rely directly and/or indirectly on groundwater supplies within Valley Water's zones receive a benefit from the settlement, without which the groundwater supplies in Valley Water's groundwater zones may be significantly impacted.

Resolution of the water rights complaint and implementation of the FHRP's and the 2003 Settlement Agreement will require a large financial commitment on the part of Valley Water for construction, operation and maintenance of infrastructure that improve habitat for fish in creeks located in the Three Creeks. Costs have been estimated but have not been completely integrated into the groundwater production charge projections, pending resolution of the water rights complaint following the completion of the FAHCE Fish Habitat Restoration Plan and Environmental Impact Report.

4

2021 PAWS REPORT

Financial Outlook of Water Utility System

4-1 INTRODUCTION

This section summarizes the maximum proposed charges for fiscal year (FY) 2021–22 and the multi-year financial analysis that serves as the foundation for those water charges in each zone. The major sources of revenue for the Water Utility are from the imposition of charges on groundwater production and from contracts for the sale of treated surface water produced by its three treatment plants. Valley Water also receives revenue from surface water charges, recycled water charges, property tax, interest earnings, grants, capital reimbursements and other sources. Valley Water assesses the need for groundwater production and other water charges annually and, in accordance with state law, prepares this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements.

The Rate Setting Process

According to Section 26.3 of Valley Water's founding legislation (District Act), proceeds from groundwater production charges can be used for the following purposes:

1. Pay for construction, operation and maintenance of imported water facilities
2. Pay for imported water purchases
3. Pay for constructing, maintaining and operating facilities which will conserve or distribute water including facilities for groundwater recharge, surface distribution, and purification and treatment
4. Pay for debt incurred for purposes 1, 2 and 3

The work of Valley Water is divided into projects. Every project has a detailed description including objectives, milestones, and an estimate of resources needed to deliver the project. To ensure compliance with the District Act, each project manager must justify whether or not groundwater production charges can be used to pay for the activities associated with their project. The financial analysis presented in this report is based on the financial forecasts for these vetted projects.

This year's groundwater production and surface water charge setting process will be conducted consistent with the District Act, and Board Resolutions 99-21 and 12-10[11]. In late 2017, the State Supreme Court found that Proposition 218 is not applicable to groundwater production charges. Procedural requirements for property related fees and charges under Proposition 218 like holding a public hearing and noticing well owners are consistent with the District Act and are continuing. The surface water charge setting process will mirror the process described in Proposition 218 for property-related fees for water services. Both the Groundwater and the Surface Water rate setting process are consistent with Proposition 26 requirements that the groundwater production and surface water charges are no more than necessary to cover reasonable costs, and bear a fair or reasonable relationship to the rate payor's burdens on or benefits received from the groundwater and surface water programs.

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[11] Resolutions 99-21 and 12-10 can be found at https://www.valleywater.org/ProposedWaterCharges.

FY 2021-22 will be the tenth year that a protest procedure will be conducted for surface water users. The results of last year's formal protest procedure for the surface water charge setting process was zero protests. As in the past, Valley Water's Board of Directors (Board) will continue to hold public hearings and seek input from its advisory committees and the public before rendering a final decision on groundwater production and surface water charges for FY 2021–22.

In late 2009, Valley Water engaged Raftelis Financial Consultants, Inc. (RFC) to independently review Valley Water's cost of service and rate setting methodology used to calculate groundwater production charges for FY 2010–11. At that time, RFC had conducted over 600 rate and financial planning studies for water and wastewater utilities across the country. Specifically, RFC reviewed the cost of service and financial planning model developed by Valley Water to calculate groundwater production charges for FY 2010–11. RFC reviewed Valley Water's rate setting methodology for consistency with industry standards, best practices, and legal considerations such as Proposition 218, the District Act, and Resolution 99-21. The methodology used to calculate groundwater production charges for FY 2010–11 is detailed in RFC's report titled "Review of the Santa Clara Valley District's Cost of Service and Rate Setting Methodology for Setting FY 2011 Groundwater Production Charges"[2]. The report was completed in March 2010 and demonstrates that Valley Water developed groundwater production charges and other charges consistent with cost of service principles and legal considerations including Proposition 218, the District Act, and Resolution 99-21. Valley Water will use the same cost of service methodology for the FY 2021–22 rate setting process.

In 2010, Valley Water engaged RFC and the water resources engineering firms of Hydrometrics Water Resources and Carollo Engineers to further analyze and quantify the conjunctive use benefit of treated water to groundwater and surface water customers. In addition, RFC analyzed the benefits of agricultural water usage to M&I users. The report titled "Report Documenting the Reasonableness of the Conjunctive Use Benefit of Treated Water to Groundwater and Surface Water Customers and the Benefit of Agricultural Customers to Municipal and Industrial Customers" was completed in February 2011 and provides further support and justification for the Valley Water's cost of service methodology.

In 2014, Valley Water engaged RFC once again to analyze and quantify the conjunctive use benefit of surface and recycled water to groundwater customers. The report titled "Report Documenting the Reasonableness of the Conjunctive Use Benefit of Surface Water and Recycled Water to Groundwater Customers"[12] was completed in February 2015 and provides further support and justification for the Valley Water's cost of service methodology.

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[12] The RFC reports, dated March 5, 2010, February 17, 2011, February 27, 2015, and February 28, 2020 can be found at: https://www.valleywater.org/ProposedWaterCharges.

Last year, Valley Water completed a scientific study of its groundwater benefit zones. Based on a comprehensive evaluation of geological studies, local groundwater data, and the services Valley Water provides, new metes and bounds were established to better reflect services and benefits received by well users. The boundaries for the North County groundwater zone (W-2) was slightly modified and the South County groundwater zone (W-5) was modified with two new zones added. South County groundwater benefit zones include Zone W-5 which overlays the Llagas Subbasin; Zone W-7, which encompasses the Coyote Valley; and Zone W-8 which encompasses areas in the foothills southeast of Uvas and Chesbro Reservoirs. More information about the Groundwater Benefit Zone study can be found online at *valleywater.org/gwbenefits*.

Overview of Customer Classes and Charges

As the primary wholesale water provider for Santa Clara County, Valley Water serves 4 customer classes including, groundwater users, treated water users, surface water users and recycled water users. Resolution 99-21 guides staff in the development of the overall pricing structure based on principles established in 1971. The general approach is to charge the recipients of the various benefits for the benefits received. More specifically, pricing is structured to manage surface water, groundwater supplies and recycled water conjunctively to prevent the over use or under use of the groundwater basin. Consequently, staff is very careful to recommend pricing for groundwater production charges, treated water charges, surface water charges and recycled water charges that work in concert to achieve the effective use of available resources (as supported by the 2010 RFC study).

Groundwater users pump water from the ground that is both naturally and artificially recharged into the groundwater basin. The groundwater production charge recoups Valley Water's costs to protect and augment this source of water, as outlined in the District Act.

Treated water users are comprised of 7 retail water companies that take treated surface water from one of Valley Water's 3 treatment plants and sell it to their end user customers. The water comes from locally captured runoff or water imported into the county. Valley Water recoups the cost of providing treated water by charging users the basic user charge, which is set equivalent to the groundwater production charge, and a treated water surcharge. The provision of treated water helps preserve the groundwater basin and therefore benefits groundwater users. This fact provides the rationale for setting the basic user charge equal to the groundwater production charge in accordance with cost of service principles as justified by the 2011 RFC study. The treated water surcharge is set by Board policy at an amount that promotes the effective use of available water resources.

Surface water users are those users permitted by Valley Water to tap raw district-managed surface water from creeks, streams, or raw water pipelines. To the extent Valley Water releases stored water from its local reservoirs, Valley Water considers this to be surface water, which is not subject to diversion by third parties. Local supplies and imported water are made available to Valley Water surface water permittees.

Surface water users pay the basic user charge, which is set equivalent to the groundwater production charge, plus a surface water master charge. The basic user charge helps pay for the cost to manage and augment surface water supplies and is set equal to the groundwater production charge, as justified by the 2015 RFC study, because surface water is considered in-lieu groundwater usage. The surface water master charge pays for costs that are specific to surface water users only, including the work to operate surface water turnouts, and maintain surface water accounts.

Recycled water users are those users who take purified wastewater for irrigation purposes. Recycled water is an all-weather supply. Recycled water charges are established at rates that maximize cost recovery while providing an economic incentive to use recycled water. The provision of recycled water helps preserve the groundwater basin and therefore benefits groundwater users. Consequently, groundwater users pay for recycled water to the extent that recycled water charges do not achieve full cost recovery, as justified by the 2015 RFC study.

Agricultural water users are a subset of the groundwater, surface water and recycled water customer classes. Section 26.1 of the District Act defines agricultural water use as “water primarily used in the commercial production of agricultural crops or livestock.” Agricultural charges are limited to a maximum of 25% of non-agricultural charges per the District Act. Board policy further limits agricultural charges to no more than 10% of non-agricultural charges in order to help preserve open space. Non-rate related revenue is used to offset lost agricultural water revenue for each customer class and is referred to as the Open Space Credit.

Non-agricultural users (also referred to as Municipal and Industrial users) are a subset of all 4 customer classes and consist of all water use other than agricultural. Non-agricultural water use charges are established for each customer class as described in the preceding paragraphs.

4-2 THE WATER CHARGE RECOMMENDATIONS FOR FISCAL YEAR 2021–22

By way of background, the Board chose to not increase groundwater production charges in all groundwater benefit zones for FY 2020-21 due to the impacts of COVID-19 on our community. In the North County Zone W-2, the Board adopted a groundwater production charge of $1,374 per acre-foot for non-agricultural water, $28.86 per acre-foot for agricultural water, and $1,474 per acre-foot for contract treated water. In the South County Zone W-5, the Board adopted a $467 per acre-foot groundwater production charge for non-agricultural water, and a $28.86 per acre-foot groundwater production charge for agricultural water. In the South County Zone W-7, the Board adopted a $481 per acre-foot groundwater production charge for non-agricultural water, and a $28.86 per acre-foot groundwater production charge for agricultural water.

In the South County Zone W-8, the Board adopted a $327 per acre-foot groundwater production charge for non-agricultural water, and a $28.86 per acre-foot groundwater production charge for agricultural water.

For North County Zone W-2, staff has developed a groundwater production charge projection based on guidance from the Board of Directors. For FY 2021-22, the proposed maximum increase is driven by multiple factors: 1) the need to purchase supplemental imported water given the dry winter so far, coupled with the recent lowering of water levels at Anderson reservoir, the county's largest surface water supply source; 2) to progress the Anderson Dam Seismic Retrofit, which would address public safety and restore operational capacity; 3) to fund key baseline projects including the Rinconada WTP reliability improvement and 10-year pipeline rehabilitation program; 4) to progress the Pacheco Reservoir Expansion, which would provide additional water storage capacity; 5) to pay for general inflation.

For South County Zones (W-5, W-7 and W-8) the FY 2021-22 proposed maximum groundwater production charges are driven by: 1) the need to purchase supplemental imported water given the dry winter so far, coupled with the recent lowering of water levels at Anderson reservoir, the county's largest surface water supply source; 2) to progress the Anderson Dam Seismic Retrofit, which would address public safety and restore operational capacity; 3) to fund the Santa Clara Conduit Rehabilitation including installation of an acoustic fiber optic monitoring system, which ensures continued delivery of water; 4) to progress the Pacheco Reservoir Expansion, which would provide additional water storage capacity; 5) to pay for general inflation.

The proposed maximum increase for South County Zone W-7 is higher than South County Zone W-5. This is primarily driven by the fact that 56% of the water managed by Valley Water (that is delivered to South County) associated with the Anderson/Coyote reservoir system, CVP imported water, and the planned expanded Pacheco Reservoir, would be used to recharge the groundwater basin underlying Zone W-7 based on historical data, while only 44% of that water would be used to recharge Zone W-5. Cost allocations to the zones reflect the distribution of water to recharge those zones. From a water usage perspective, Zone W-7 only accounts for 22% of the groundwater pumping in South County, while Zone W-5 accounts for 76%. Since the percentage of cost being allocated to each zone differs from the percentage of water usage attributed to each zone, it follows that the groundwater charge per acre-foot required for cost recovery would be higher for Zone W-7 than Zone W-5.

Zone W-8 does not benefit from the Anderson/Coyote reservoir system, CVP imported water, or the planned expanded Pacheco Reservoir. Nor does it benefit from the recycled water facilities operated by Valley Water in partnership with the South County Regional Wastewater Authority located in Gilroy. Consequently, the groundwater charge projection for Zone W-8 is significantly lower than both Zone W-5 and Zone W-7.

Staff is assuming a water usage projection for FY 2021-22 of 232,000 AF, which is 2,000 AF higher than the FY 2020–21 budget and represents an 18.9% percent reduction relative to Calendar Year 2013.

In general, lower water use relative to historical usage patterns translates to reduced revenue and therefore upward pressure on water rates.

Financial Outlook of Water Utility System

The draft FY 2022–26 Capital Improvement Plan (CIP) totals approximately $4.8 billion over the next 10 years. Significant investments planned for FY 2021–22 include:

- $131 million for Dam Seismic retrofits and improvements at Anderson
- $31 million for the planned Pacheco Reservoir Expansion
- $21 million for the Rinconada Water Treatment Plant Reliability Improvements
- $16 million for various pipeline rehabilitation projects
- $15 million for recycled water pipeline expansion in Gilroy
- $11 million for CVP capital payments (not related to the Delta Conveyance project)

Valley Water must continue investing significant capital dollars into repairing and rehabilitating the infrastructure required to deliver safe, reliable drinking water to Silicon Valley residents and businesses. Valley Water is projecting rate increases over the next 10 years in order to significantly invest in several key areas:

- $1.45 billion over the next 10 years for repair, rehabilitation and seismic retrofitting of the system behind your water supply, including treatment plants, pipelines, pump stations, dams and recharge ponds.
- $2.2 billion for the planned Pacheco Reservoir Expansion, which would help provide local water supply reliability for the future (cost would be offset by a $484.55 million Proposition 1 award, 20% of the remaining costs by assumed partnerships with other agencies, and potential federal funding).
- $591 million for the Expedited Purified Water Project which would develop 9,000 AF to 12,000 AF of new weatherproof water supply, to be designed, built, operated and financed via a Public-Private Partnership (P3).
- $66 million over the next 10 years to solve the statewide issue of the Bay Delta, where 40 percent of our water supply travels through. A catastrophic event in the Delta could interrupt this vital supply of water to Santa Clara County for up to two years or more.

The increase for FY 2021–22 will bring in revenue required to pay for critical investments in the water supply infrastructure, investments in future supplies, and rising operating costs. The effective management of the region’s water supply system includes securing imported water supplies, storing surface water in local reservoirs, replenishment and protection of the groundwater basin, purification at local water treatment plants, testing for consistent water quality, transport and delivery of water to local water providers, and conservation programs.

Given the financial picture summarized above, staff proposes the following water charges for FY 2021–22:

For the North County Zone W-2, staff proposes up to a 9.6 percent increase, or a $1,506 per acre- foot groundwater production charge for non-agricultural water; a 10 percent increase, or $1,621 per acre-foot for contract treated water; and an 8.4 percent increase or, $1,706 per acre-foot for non-contract treated water. The average household would experience an increase in their monthly bill ranging from $4.55 to $5.06 or about 15 to 17 cents a day. Customers may also experience additional charge increases enacted by their retail water provider.

For the South County Zone W-5, staff proposes up to a 4.6 percent increase, or a $488.50 per acre- foot groundwater production charge for non-agricultural water. The average household would experience an increase in their monthly bill of $0.74 or about 3 cents per day.

For the South County Zone W-7, staff proposes up to a 10.3 percent increase, or a $530.50 per acre-foot groundwater production charge for non-agricultural water. The average household would experience an increase in their monthly bill of $1.70 or about 6 cents per day.

For the South County Zone W-8, staff proposes up to a 4.4 percent increase, or a $341.50 per acre-foot groundwater production charge for non-agricultural water. The average household would experience an increase in their monthly bill of $0.50 or about 2 cents per day.

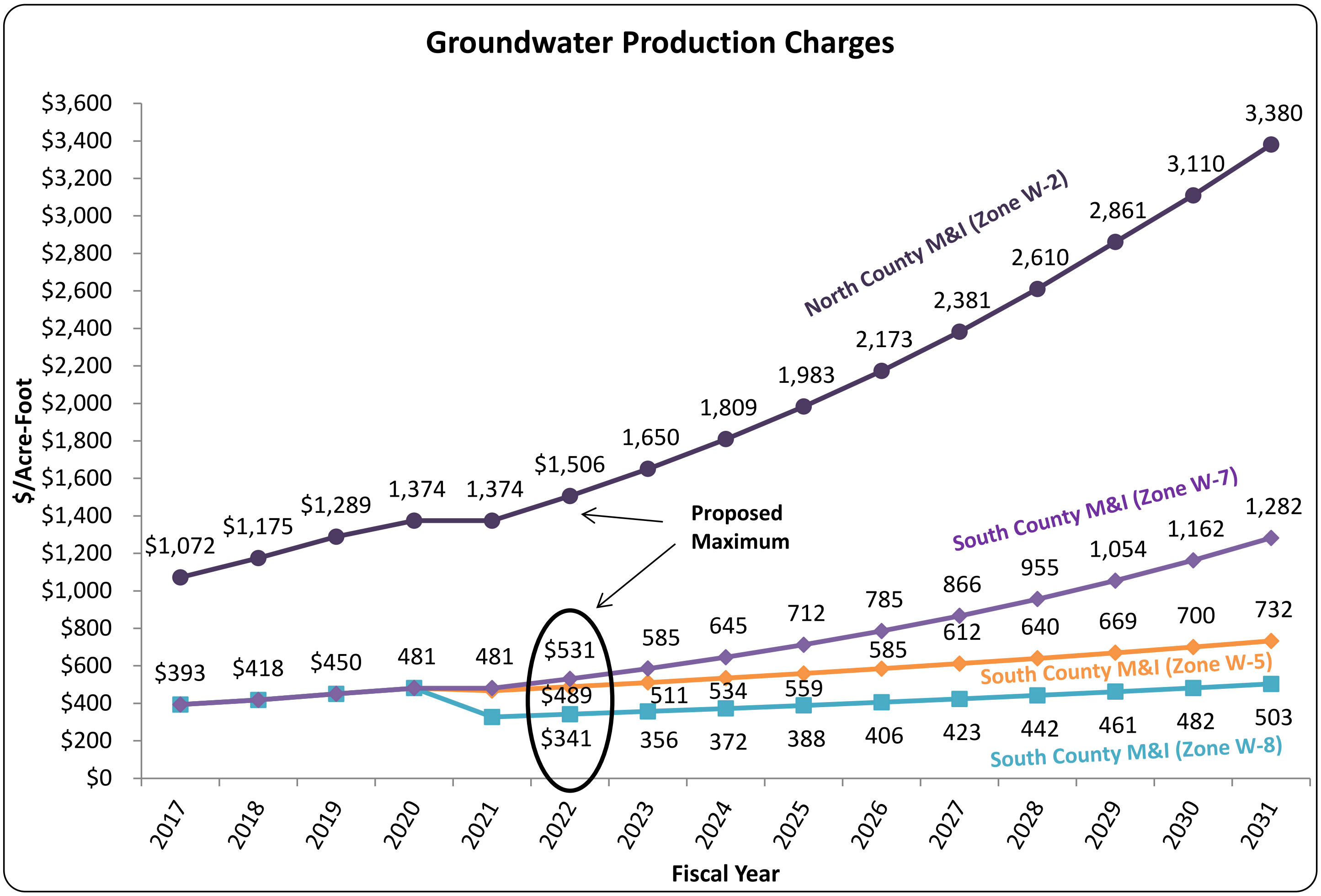
The proposed maximum agricultural groundwater production charge in any groundwater benefit zone is $85.38 per acre-foot, which would be a 195.8 percent increase, or roughly a $9.41 increase per month per acre for the average agricultural water user. The proposed maximum agricultural groundwater production charge is calculated at 25 percent of the lowest M&I charge which is Zone W-8.

Staff recommends increasing the surface water master charge up to 9.6 percent, from $37.50 per acre-foot to $41.10 per acre-foot, to align revenues with the costs related to managing, operating and billing for surface water diversions.

For recycled water, staff recommends increasing the M&I charge up to 4.8 percent to $468.50 per acre-foot. For agricultural recycled water, the proposed maximum is a 100.5 percent increase to $112.78 per acre-foot. These recommendations would maximize cost recovery while concurrently providing an economic incentive to use recycled water.

Figure 4-2.1 illustrates the multi-year groundwater production charge projection, which represents staff's proposed maximum groundwater charges for FY 2021–22 and a future projection based on the assumption that Valley Water will continue to provide the level of service budgeted in FY 2021–22. Potential future uncertainties could result in higher costs or the identification of additional capital or operations projects, which would result in a higher groundwater charge projection than that shown.

Figure 4-2.1 Ten Year Projection



Note: Groundwater production charges shown are rounded to the nearest dollar.

Table 4-2.1 shows groundwater production and other charges in fiscal years 2019–20 and 2020–21. The final column contains the proposed water charges for FY 2021–22, which are in accordance with the pricing policy described in Resolution 99-21.

Table 4-2.1 Summary of Charges (Dollars Per Acre-Foot, $/AF)

	Dollars Per Acre Foot		
	FY 2019-20	FY 2020-21	Proposed Maximum FY 2021-22
Zone W-2 (North County)			
Basic User/Groundwater Production Charge			
Municipal & Industrial	1,374.00	1,374.00	**1,506.00**
Agricultural	28.86	28.86	**85.38**
Surface Water Charge			
Surface Water Master Charge	37.50	37.50	**41.10**
Total Surface Water, Municipal & Industrial*	1,411.50	1,411.50	**1,547.10**
Total Surface Water, Agricultural*	66.36	66.36	**126.48**
Treated Water Charges			
Contract Surcharge	100.00	100.00	**115.00**
Total Treated Water Contract Charge**	1,474.00	1,474.00	**1,621.00**
Non-Contract Surcharge	200.00	200.00	**200.00**
Total Treated Water Non-Contract Charge***	1,574.00	1,574.00	**1,706.00**

*Note: The total surface water charge is the sum of the basic user charge (which equals the groundwater production charge) plus the water master charge

**Note: The total treated water contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the contract surcharge

***Note: The total treated water non-contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the non-contract surcharge

Table 4-2.1 Summary of Charges (Dollars Per Acre-Foot, $/AF) … Continued

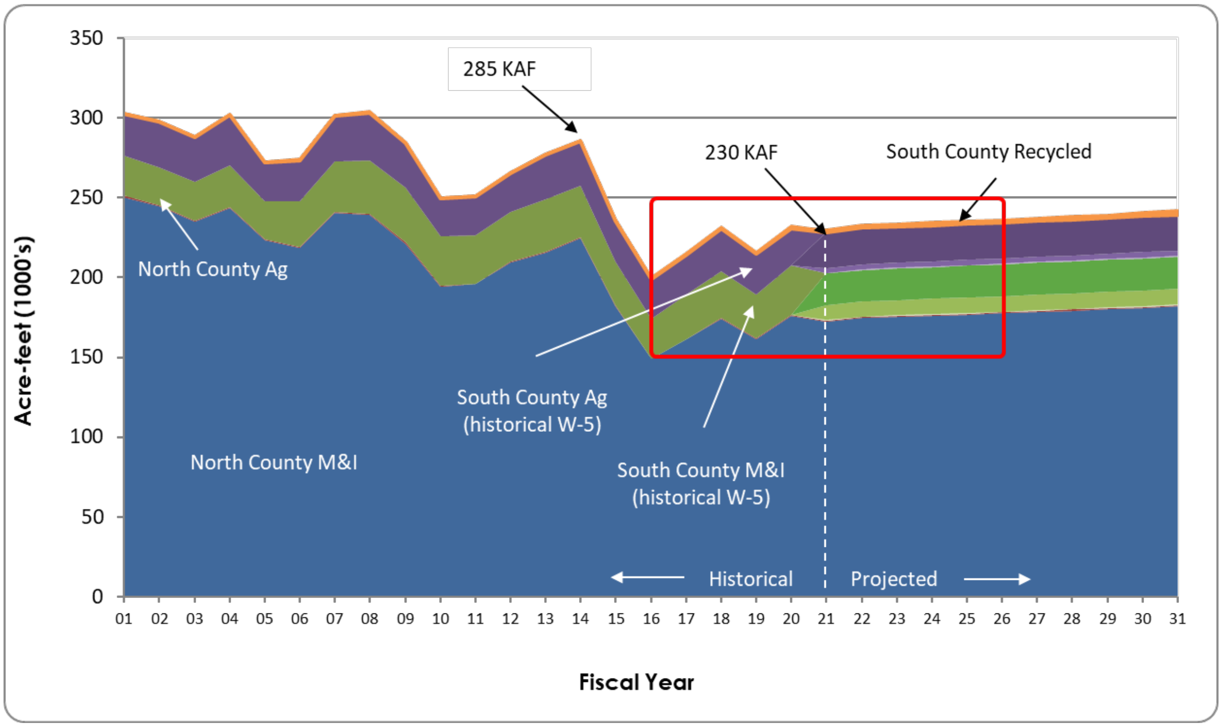
	Dollars Per Acre Foot		
	FY 2019–20	FY 2020–21	Proposed Maximum FY 2021-22
Zone W-5 (Llagas Subbasin)			
Basic User/Groundwater Production Charge			
Municipal & Industrial	481.00	467.00	**488.50**
Agricultural	28.86	28.86	**85.38**
Surface Water Charge			
Surface Water Master Charge	37.50	37.50	**41.10**
Total Surface Water, Municipal & Industrial*	518.50	504.50	**529.60**
Total Surface Water, Agricultural*	66.36	66.36	**126.48**
Recycled Water Charges			
Municipal & Industrial	461.00	447.00	**468.50**
Agricultural	56.26	56.26	**112.78**
Zone W-7 (Coyote Valley)			
Basic User/Groundwater Production Charge			
Municipal & Industrial	481.00	481.00	**530.50**
Agricultural	28.86	28.86	**85.38**
Surface Water Charge			
Surface Water Master Charge	37.50	37.50	**41.10**
Total Surface Water, Municipal & Industrial*	518.50	518.50	**571.60**
Total Surface Water, Agricultural*	66.36	66.36	**126.48**
Zone W-8 (Uvas/Chesbro)			
Basic User/Groundwater Production Charge			
Municipal & Industrial	481.00	327.00	**341.50**
Agricultural	28.86	28.86	**85.38**
Surface Water Charge			
Surface Water Master Charge	37.50	37.50	**41.10**
Total Surface Water, Municipal & Industrial*	518.50	364.50	**382.60**
Total Surface Water, Agricultural*	66.36	66.36	**126.48**

*Note: The total surface water charge is the sum of the basic user charge (which equals the groundwater production charge) plus the water master charge

Figure 4-2.2a illustrates historical and projected water use countywide, which is a key driver of water charge related revenue. Water usage in FY 2019–20 was estimated at approximately 232,000 AF, which is roughly 7,000 AF higher than budgeted and is roughly a 19 percent reduction versus Calendar Year 2013 of 286,000 AF. For the current year, FY 2020-21, staff estimates that water usage will be approximately 230,000 AF, which is flat to the FY 2020-21 budget and roughly a 20 percent reduction versus calendar year 2013. For FY 2021–22, staff is assuming a slightly higher water usage projection of 232,000 AF, which is 2,000 AF higher than the FY 2020–21 estimated actual and represents approximately a 19 percent reduction relative to Calendar Year 2013.

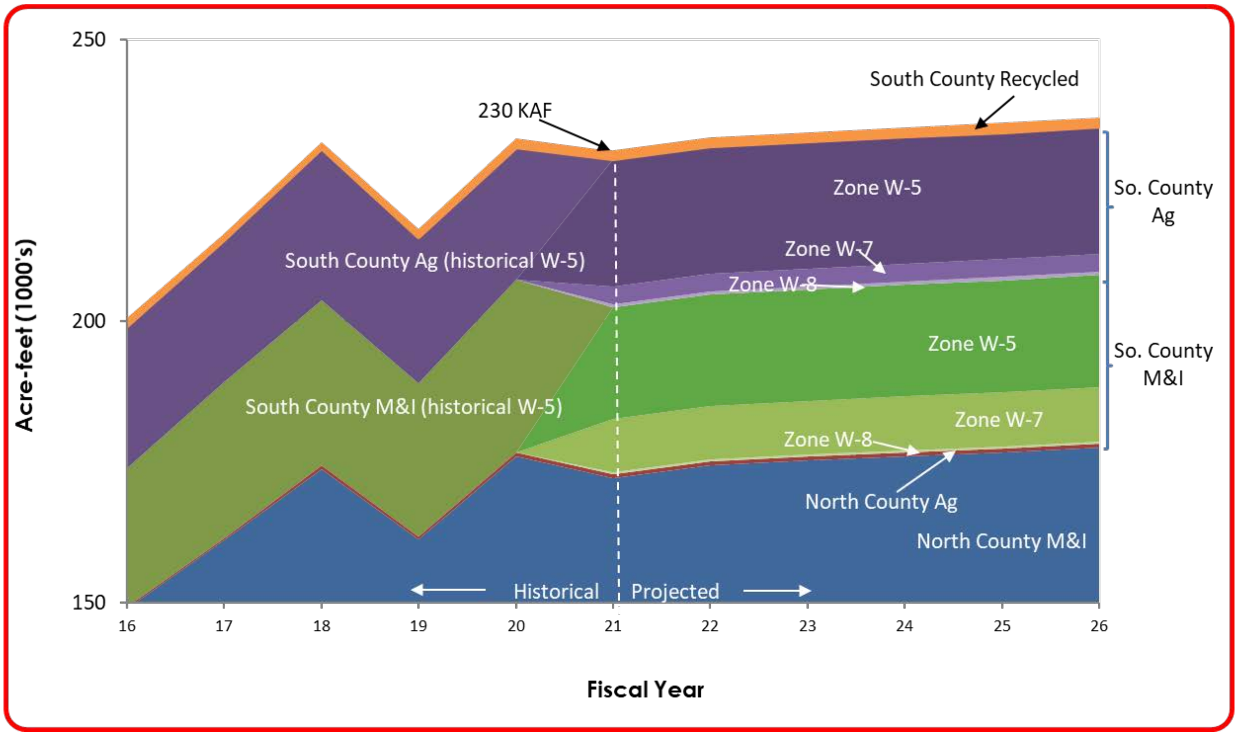
Figure 4-2.2b illustrates the transition from the historical 2 groundwater benefit zones to 4 groundwater benefit zones. Effective July 1, 2020 the existing groundwater benefit zones W-2 and W-5 were modified, and two new zones were created: W-7 (Coyote Valley) and W-8 (below Uvas and Chesbro Reservoirs). New metes and bounds (the survey description that defines the boundaries of the zones) were developed in accordance with Santa Clara Valley Water District Act requirements.

Figure 4-2.2a Historical and Projected District-Managed Water Use



▭ Represents the portion of the graph shown in Figure 4-2.2b

Figure 4-2.2b Close up of Water Use Projection for Zones



4-3 FINANCIAL OVERVIEW OF VALLEY WATER

Valley Water uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. Fund accounting allows government resources to be segregated and accounted for according to their intended purposes. Accounts related to activities of the Water Utility are segregated into the Water Utility Funds comprised of the Water Utility Enterprise Fund and the State Water Project (SWP) Fund. For the Water Utility Enterprise Fund, revenue accounts include groundwater production, treated water, property taxes, surface water, interest earnings, reimbursements, grants and other. Cost accounts include both direct and indirect or overhead costs associated with Water Utility projects and activities. The SWP Fund accounts specifically for SWP Tax revenue and SWP contractual costs (Note that SWP Tax revenue can only be spent on SWP contractual costs). Table 4-3.1 shows an overview of the funds at Valley Water including the Water Utility Funds and the estimated revenues, costs and reserves for FY 2021–22 for each fund. Throughout this report, the term “Water Utility” or “Water Utility Enterprise” refers to the combination of the Water Utility Enterprise Fund and the SWP Fund.

Table 4-3.1 FY 2021–22 Projected Funds Analysis

	Water Utility Funds				
(Millions $)	**Water Utility Enterprise Fund**	**State Water Project Fund**	**Safe, Clean Water Fund**	**Watershed Funds**	**Administration Funds**
Revenue	304.1	27.0	106.2	123.0	10.3
Interfund Transfer	(4.7)	-	2.5	(4.3)	7.4
Operations Costs	(196.7)	(27.6)	(24.1)	(67.5)	(108.2)
Debt Service	(52.6)	-	(7.0)	-	(0.5)
Capital	(286.2)	-	(146.0)	(46.4)	(14.9)
Debt Proceeds	174.3	-	100.00		-
Intra-District Reimbursements[1]	-	-	-	-	102.9
Balance[2]	**(61.8)**	**(0.6)**	**31.7**	**4.6**	**(2.9)**
Reserves					
Restricted	66.8	-	54.2	-	-
Committed	45.0	-	-	94.0	6.9
Designated Liability	-	-	-	-	12.6
Total Reserves	**111.8**	**-**	**54.2**	**94.0**	**19.5**

Notes:

[1] Intra-District Reimbursements represent overhead costs that have been allocated to the Water Utility; Safe, Clean Water; and Watersheds (included in the operations and capital costs for those funds)

[2] Positive balances indicate funds flowing into reserves. Negative balances indicate funds flowing out of reserves.

The Safe, Clean Water Fund accounts for the program that voters renewed in November 2020 for the purpose of addressing several community priorities. These priorities are ensuring a safe, reliable water supply; reducing toxins, hazards, and contaminants in our waterways, protecting our water supply and dams from earthquakes and other natural disasters; restoring wildlife habitat and providing open space; providing flood protection to homes, businesses, schools, streets, and highways; and supporting public health and public safety for our community. The primary source of revenue for this fund is a special parcel tax. This fund supports several projects that benefit not only the community at large but also the Water Utility including hazardous materials management and response, water conservation rebates and programs, and stormwater runoff management. Most notably this fund will contribute $54 million toward the Anderson Dam Seismic Retrofit project in the form of a reimbursement to the Water Utility Enterprise Fund. It will also apportion some of the revenue towards the Treated Water Pipeline Reliability and the Pacheco Reservoir Expansion projects. For more information on the Safe, Clean Water program please visit *www.valleywater.org*.

The Watershed Funds are a segregated grouping of funds with separate funding sources (including Benefit Assessments and 1 percent ad valorem property taxes) for the purpose of providing flood protection and watershed management.

The Administration Funds include the General Fund, Fleet Fund, Information Technology Fund, and Risk

Fund to account for all revenues and expenditures necessary to carry out basic governmental activities of Valley Water that are not accounted for through other funds. Administration Funds expenditures that are not offset by Administration Funds revenues are allocated to the Water Utility; Safe, Clean Water; and Watershed funds through an overhead rate at the project level.

4-4 WATER UTILITY FINANCES FOR FISCAL YEARS 2019–20 & 2020–21

Fiscal Year 2019–20

Actual overall revenue for FY 2019–20 was $17.8 million less than the adopted budget of $301.7 million. Lower water usage resulted in $20 million lower operating revenues that was partially offset by $0.6 million higher property tax revenue and $2.5 million higher interest earnings, intergovernmental services, and other revenues.

Actual operations outlays came in at $199.3 million and were $31.4 million lower than the adopted budget. The savings were driven by $9.8 million lower debt service due to postponing a planned debt issuance because of slower than anticipated capital spending, and $21.6 million operations cost savings due primarily to lower than anticipated spending on imported water purchases and budgetary savings driven by the pandemic.

Unspent capital budget was carried forward to FY 2020–21 consistent with accounting practices.

Fiscal Year 2020–21

Staff estimates that FY 2020–21 revenue will come in near the adopted budget revenue of $320.7 million. Operations and capital costs are anticipated to come in at or below budget. Staff anticipates that discretionary reserve levels will come in at budget at year end.

4-5 OVERVIEW OF OPERATING AND LONG-TERM CAPITAL PLANS

To develop a charge structure that will support planned work, staff analyzes the immediate needs of Valley Water as well as anticipated requirements in the years to come.

Operations Costs

Operations costs are projected to increase at an average of 4.7 percent per year over the next ten years. The growth is largely driven by: 1) the ramp up of payments associated with the Delta Conveyance Project; and 2) the beginning of operations of the Expedited Purified Water Project in FY 2027-28, which would produce 9,000 to 12,000 AF of new water supply. Operations cost increases are also driven by anticipated inflation including cost increases associated with employee salaries and benefits.

Table 4-5.1 shows Valley Water's Water Utility operating program for FY 2019–20, FY 2020–21, and projected for FY 2021–22. The Water Utility staff strive to implement a program that ensures that treated water quality standards are met and that water supplies are reliable to meet current and future demand.

Table 4-5.1 Operating Budget Summary

		Thousands $			
Cost Center	Ends Policy	Actual FY 20	Adjusted FY 21	Projected FY 22	Description of Cost Centers and Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	88.127	108,137	124,371	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs. Activities include: groundwater level & quality monitoring; groundwater modeling; dams and reservoir operations & maintenance; imported water supply management; long-term Delta issues resolution; operations and maintenance of San Felipe Reaches 1-3, including mechanical and electrical; operations planning; water rights protection; Urban Water Management Plan; administration of recycled water agreements, technical studies; water conservation technical assistance, outreach and education; environmental planning & compliance; well permitting and destruction; Silicon Valley Advanced Water Purification Center operations and maintenance; and habitat conservation and mitigation commitments.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	13,101	15,331	17,971	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems. Activities include: operations and maintenance of recharge ponds, canals, pipelines & diversions including vegetation management; operations and maintenance of raw water distribution system, including mechanical and electrical; raw water corrosion control; environmental compliance support.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	39,366	46,522	49,446	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to retail customers and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts. Activities include: operations and maintenance of 3 water treatment plants; Water District laboratory operations; water quality planning, testing, research, and reporting; operations and maintenance of treated water transmission and distribution system; and recycled water transmission and distribution general maintenance.
Administration & General	Support Services	27,936	30,682	32,569	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Activities include: asset protection evaluation and planning; integrated regional water management plan; water system computer modeling; urban runoff pollution prevention; general & division management; performance measures; financial support & water charge setting; customer relations; health and safety training; billing; data maintenance; auditing; meter reading, testing, repair, installation, backflow prevention; emergency services; warehouse and equipment services; and real estate services.
	Total Program Requirements	**168,530**	**200,673**	**224,357**	

Capital Improvement Program

Valley Water constructs, operates and maintains reservoirs, pipelines, recharge facilities, and water treatment plants that are needed to achieve the Board's Ends Policies. On an annual basis, Valley Water conducts a process to plan for capital improvements and identify the resource needs and constraints to implement the projects. The result of this process is Board approval of a rolling 5-Year Capital Improvement Program (CIP)[13].

Table 4-5.2 shows the capital projects identified in a preliminary version of the FY 22-26 CIP and associated expenditures for the next ten fiscal years. The table shows funding $4.8 billion worth of capital projects between FY 2021–22 and FY 2030–31. Approximately $2.2 billion of the program is allocated to a planned reservoir expansion project that will provide additional storage capacity for storm runoff and imported water. Roughly $591 million of the program is for recycled and purified water expansion, which will provide new drought-proof water supplies to help ensure future water supply reliability. The remaining portion of the capital program is primarily dedicated to asset management of Water Utility Enterprise facilities throughout the county. Staff continues to conduct a validation process as part of Valley Water's Asset Management Program, to identify if there is a compelling business case for capital projects. All newly proposed projects will undergo the validation process prior to being proposed for inclusion in the CIP.

The capital program, including debt proceeds and debt service flow through the North County Zone W-2 financial model. The North County Zone W-2 is reimbursed for all capital projects that benefit South County Zones W-5, W-7, and W-8 via a capital cost recovery payment over a time period of 30 years, beginning when the project is completed.

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[13] The latest CIP can be accessed at www.valleywater.org/CIP.

Table 4-5.2 Capital Improvements Projects – Fiscal Years 2021–22 Through 2030–31

Water Utility CIP FY 2022-31 Sorted by Cost Center (Funded)	Planned Funding with Inflation (Thousands of Dollars)						
Name	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY 27-31**	**Total FY 22-31**
SOURCE OF SUPPLY							
Pacheco Reservoir Expansion*	30,918	45,103	48,627	235,788	304,583	1,500,620	2,165,639
EPWP[2]. Indirect Potable Water Reuse Projects	1,140	29,151	30,382	176,239	177,647	176,127	590,686
Anderson Dam Seismic Retrofit (C1)*	130,833	75,085	70,155	52,340	47,088	173,455	548,956
Central Valley Project Capital Payments*	11,156	11,549	11,955	12,375	12,811	63,254	123,100
Guadalupe Dam Seismic Retrofit, Design and Construction		94	114	13,163	26,249	33,164	72,784
Small Capital Improvements, San Felipe Reach 1*	1,537	1,522	102	1,030	112	65,284	69,587
Almaden Dam Improvements				103	125	51,007	51,235
South County Recycled Water Pipeline, Short-Term Implementation Phase 1B*	15,314	4,895					20,209
Coyote Pumping Plant ASD[1]. Replacement		6,340	4,123	646	81		11,190
Dam Seismic Stability Evaluation*	65	437	456	5,903	436	1,430	8,727
South County Recycled Water Pipeline Land Rights	345	3,407	3,605				7,357
Small Capital Improvements, San Felipe Reach 3*	1,370		51	11		3,195	4,627
Calero and Guadalupe Dams Seismic Retrofits, Planning	2,080	371					2,451
Calero Dam Seismic Retrofit, Design and Construction						3,763	3,763
Coyote Warehouse*	73	66					139
Small Capital Improvements, San Felipe Reach 2*	10					12	22
Source of Supply Subtotal	194,841	178,020	169,570	497,598	569,132	2,071,311	3,680,472
RAW WATER TRANSMISSION & DISTRIBUTION							
FAHCE[4]. Implementation		4,739	4,379	14,691	14,690	106,609	145,108
Almaden Valley Pipeline Replacement	828	1,253	2,465	1,893	2,396	28,097	36,932
Vasona Pumping Plant Upgrade	717	19,159	545	200			20,621
Small Capital Improvements, Raw Water Transmission*	169	17	382	6,722	272	4,248	11,810
FAHCE[4]. Stevens Creek Moffett Ave Fish Ladder, 90%		1,346	1,633				2,979
Pacheco/Santa Clara Conduit Right of Way Acquisition*	1,662	306					1,968
FAHCE[4]. Stevens Creek Multi-Port Outlet at Dam, 90%		346	1,094	43			1,482
Raw Water Transmission & Distribution Subtotal	3,376	27,166	10,497	23,549	17,358	138,954	220,900
WATER TREATMENT							
RWTP[6]. Reliability Improvement	20,620	21,901	24,570	22,700	17,660		107,451
Small Capital Improvements, Water Treatment	7,503	1,415	5,382	3,170	3,370	23,152	43,992
PWTP[5]. Residuals Management	1,987	1,510	1,625	10,096	18,782	9,572	43,572
RWTP[6]. Residuals Remediation	5,316	8,791	633				14,740
Water Treatment Plant Electrical Improvement	879	2,488	5,851	2,049			11,267
STWTP[7]. Filter Media Replacement	2,812	4,912	1,728				9,452
Water Treatment Plant Implementation	3,322	3,418					6,740
RWTP[6]. Treated Water Valves Upgrade	6						6
Water Treatment Subtotal	42,445	44,435	39,789	38,015	39,812	32,724	237,220
TREATED WATER TRANSMISSION & DISTRIBUTION							
Treated Water Isolation Valves			2,330	0	2,439	2,642	7,411
Small Capital Improvements, Treated Water Transmission	36	39	30	119	52	225	531
Treated Water Transmission & Distribution Subtotal	36	39	2,360	119	2,491	2,897	7,942
ADMINISTRATION AND GENERAL							
Capital Program Services Administration*	3,970	4,637	4,650	7,427	8,214	48,075	76,973
10-Year Pipeline Rehabilitation (FY 2018-27)*	16,243	25,134	11,457	12,171	1,756	2,110	68,871
Metcalf Ponds, Design and Construction*		2,184	2,282	2,385	11,680	12,049	30,580
GS Capital Program Services	807	902	905	1,445	1,598	9,353	15,010
CIP Development and Administration*	699	781	783	1,251	1,384	8,099	12,997
Capital Warranty Services*	1,045	1,092	1,141	1,193	1,246	7,124	12,841
Ogier Ponds, Construction*				0	0	11,836	11,836
Headquarters Operations Building	1,253	1,245	3,926	1,431	1,495	0	9,351
Survey Management and Technical Support*	446	499	500	799	884	5,173	8,303
WTP-WQL[8]. Network Equipment*	89	1,391	2,803	798	287	2,819	8,187
Distribution Systems Implementation	2,858	2,668		0	0	0	5,526
SCADA[3]. Implementation	2,387	2,728		0	0	0	5,115
Capital Placeholder		1,500	4,725	4,325	33,475	301,927	345,952
Projected Carryforward*	16,990			0	0	0	16,990
Administration and General Subtotal	46,788	44,761	33,173	33,225	62,019	408,566	628,532
TOTAL FUNDED	287,486	294,421	255,389	592,507	690,812	2,654,452	4,775,067

Footnotes for Table 4-5.2, Capital Improvements Projects – Fiscal Years 2021-22 Through 2030-31:

1. Adjustable Speed Drive
2. Expedited Purified Water Program
3. Supervisory Control and Data Acquisition
4. Fisheries and Aquatic Habitat Collaborative Effort
5. Penitencia Water Treatment Plant
6. Rinconada Water Treatment Plant
7. Santa Teresa Water Treatment Plant
8. Water Treatment Plant – Water Quality Lab

* The asterisked projects would benefit one or more of the South County Zones W-5, W-7, & W-8 and therefore would be funded in part or in whole by the South County.

Table 4-5.3 lists the validated but not yet funded capital projects under the maximum proposed charges for FY 2021–22. The validated unfunded capital projects total approximately $319 million over the next ten years. A higher groundwater production charge projection would be necessary to fund these capital projects.

Table 4-5.3 List of Validated Unfunded Capital Projects

	Proposed Funding in Raw Dollars (Thousands of Dollars)						
Name	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Years 6-10**	**Total Yr 1-10**
SOURCE OF SUPPLY							
Long-Term Purified Water Program Elements			0	6,681	8,296	192,175	207,152
Chesbro and Uvas Dam Seismic Retrofits*			17,900	17,900	17,900	35,800	89,500
South County Recycled Water New Storage Tank*	1,000	1,500	2,000	1,500	1,000		7,000
Source of Supply Subtotal	1,000	1,500	19,900	26,081	27,196	227,975	303,652
RAW WATER TRANSMISSION & DISTRIBUTION							
Alamitos Diversion Dam Improvements	974	1,371					2,345
Coyote Diversion Dam Improvements	114	1,259	765				2,138
Raw Water Transmission & Distribution Subtotal	1,088	2,630	765	0	0	0	4,483
WATER TREATMENT							
RWTP Ammonia Storage & Metering Facility Upgrade	279	465	1,229	2,862	1,016		5,851
Water Treatment Subtotal	279	465	1,229	2,862	1,016	0	5,851
ADMINISTRATION AND GENERAL							
Fleet and Facility Annex Improvements*	920	3,462	337				4,719
Administration and General Subtotal	920	3,462	337	0	0	0	4,719
TOTAL UNFUNDED	3,287	8,057	22,231	28,943	28,212	227,975	318,705

4-6 FINANCES

Financing and Bond Rating

To fund the construction of new facilities, Valley Water has historically relied on both pay-as-you-go financing as well as short-term and long-term debt financing. Water utility debt service will increase by roughly $8.5 million in FY 2021–22 due to a planned long-term debt issuance. Looking forward, capital improvement needs total roughly $4.8 billion for the ten fiscal years 2021–22 through 2030–31. As shown in Figure 4-6.1, Valley Water will see debt service rise from $52.6 million in FY 2021–22 to roughly $194.4 million in FY 2030–31 as a result of periodic debt issuances to fund capital projects. Total outstanding debt is shown in Figure 4-6.2 and is projected to increase from $847 million in FY 2021–22 to almost $2.9 billion in FY 2030–31. Projected outstanding debt would be higher if all validated unfunded capital projects were funded. Conversely, the debt level could be reduced if capital projects are eliminated or postponed, or if further external funding is found.

Figure 4-6.1 Projected Debt Service

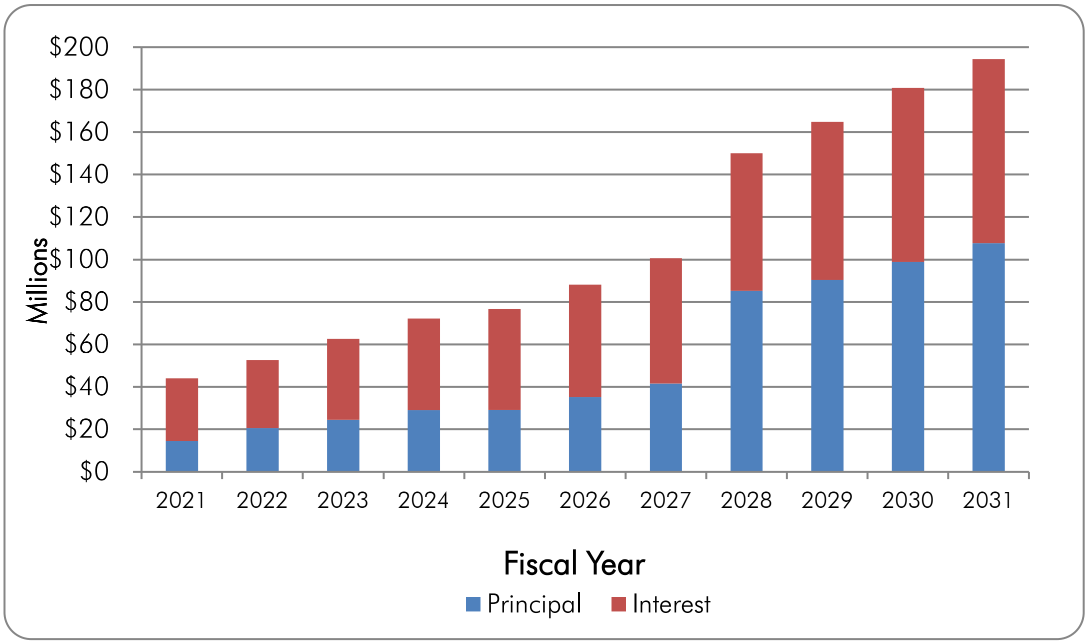
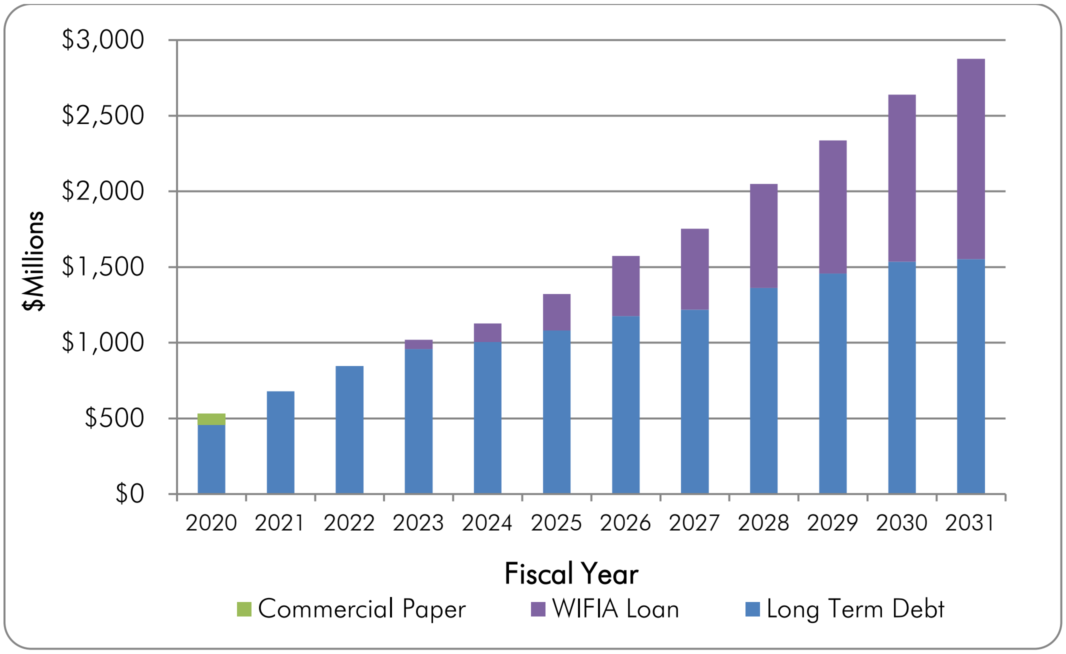


Figure 4-6.2 Projected Outstanding Debt



Current Water Utility senior lien debt issuances are rated Aa1 from Moody's and AA- from Standard & Poor's. Current Water Utility parity lien debt issuances are rated Aa1 from Moody's and AA+ from Fitch. These ratings reflect Valley Water's strong financial position and the highly rated credit worthiness of Valley Water's issued securities. The ratings are among the highest for a water-related governmental entity in the state of California, which helps keep interest costs borne by Valley Water at a minimum.

Water Utility Funds Projected Proforma

Table 4-6.1 shows the projected revenues, expenditures, and reserves over the next ten years for the Water Utility Funds. By financing with a combination of debt, current year revenue, and reserves, Valley Water can adequately fund its capital investment plan. Based on the previously discussed multi-year groundwater charge projection, key discretionary reserves (the operating and capital reserve plus the supplemental water supply reserve) would be maintained at or above the minimum per Valley Water's policy. The minimum per policy for these reserves equates to having roughly 3 months' worth of Water Utility operating outlays in the bank. These reserves serve several purposes including: 1) to meet cash flow needs; 2) provide emergency funding; and 3) to provide a funding source for future operating and capital needs.

In FY 2016-17, the Board established a Drought Contingency Reserve that would be built up in healthier rainfall and economic times. The purpose of this reserve is to offset costs that arise during a drought and help provide water rate stabilization. The financial model reflects a current balance of $10 million for the Drought Contingency Reserve. In FY 2018-19, Valley Water added a new reserve called the Guiding Principal #5 (GP 5) reserve to hold unencumbered, unspent balances approved by the Board in prior years for the GP 5 program. GP 5 funds are set aside for certain communities and agencies that currently pay the State Water Project Tax but receive 85% of their water supply from non-Valley Water managed sources. The GP 5 reserve balance as of the end of FY 2019-20 is $6.6M. Valley Water's current reserve policy can be found within the Financial Summaries section of the FY 2020-21 Budget document[14].

The ten-year financial plan shown in Table 4-6.1 reflects a Senior/Parity Lien Debt Service Coverage Ratio ranging between 1.95 and 2.66 between FY 2021-22 and FY 2030-31. Targeting a ratio of 2.0 or better helps to ensure financial stability and continued high credit ratings.

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[14] The FY 2019-20 Budget document is located at https://www.valleywater.org/how-we-operate/FinanceBudget.

Table 4-6.1 Ten-Year Water Utility Plan – ($ in Thousands)

	Actual	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
Operating Revenues												
Groundwater Production Charges	$112,560	$121,105	$137,161	$150,237	$164,601	$180,369	$197,713	$216,757	$237,671	$260,639	$283,753	$309,384
Surface & Recycled Water Charges	$1,713	$2,562	$2,880	$3,198	$3,468	$3,763	$4,086	$4,436	$4,819	$5,235	$6,121	$6,595
Treated Water Charges	$152,622	$137,399	$151,102	$165,404	$181,154	$198,496	$217,774	$239,019	$262,434	$288,241	$314,176	$342,584
Other	$462	$462	$462	$462	$462	$462	$462	$462	$462	$462	$462	$462
Inter-governmental Services	$3,744	$1,317	$1,317	$1,324	$1,105	$1,322	$1,140	$1,161	$1,182	$1,205	$1,460	$1,246
Total Operating Revenue	**$271,101**	**$262,845**	**$292,922**	**$320,625**	**$350,790**	**$384,412**	**$421,175**	**$461,835**	**$506,568**	**$555,782**	**$605,972**	**$660,271**
Non-Operating Revenues												
Property Taxes	$30,168	$26,217	$34,893	$38,204	$40,526	$42,860	$45,205	$47,562	$49,931	$52,314	$55,175	$58,387
Interest	$5,500	$3,500	$1,430	$1,161	$1,240	$1,308	$1,338	$1,692	$1,870	$2,076	$2,185	$2,759
Capital Contributions	$4,345	$15,133	$453	$22,866	$26,838	$103,395	$103,894	$103,397	$103,596	$1,602	$1,665	$2,005
Semitropic Sales	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other	$2,221	$1,401	$1,408	$1,416	$1,425	$1,434	$1,443	$1,453	$1,463	$1,474	$1,485	$1,497
Total Non-Operating Revenues	$42,235	$46,251	$38,184	$63,647	$70,028	$148,997	$151,880	$154,104	$156,860	$57,465	$60,510	$64,648
Total Revenue	**$313,336**	**$309,096**	**$331,106**	**$384,272**	**$420,818**	**$533,409**	**$573,055**	**$615,939**	**$663,428**	**$613,247**	**$666,482**	**$724,918**
	9.6%	-1.4%	7.1%	16.1%	9.5%	26.8%	7.4%	7.5%	7.7%	-7.6%	8.7%	8.8%
Operating Outlays												
Operations	$165,118	$200,390	$224,046	$232,903	$243,742	$245,361	$246,776	$261,852	$292,585	$302,019	$305,782	$315,649
Operating Projects	$247	$282	$311	$327	$337	$349	$358	$371	$384	$397	$411	$422
Debt Service	$34,175	$44,015	$52,561	$62,740	$72,261	$76,720	$88,118	$100,490	$150,087	$164,802	$180,752	$194,364
Total Operating Outlays	**$199,540**	**$244,687**	**$276,918**	**$295,970**	**$316,341**	**$322,430**	**$335,253**	**$362,713**	**$443,056**	**$467,218**	**$486,945**	**$510,434**
Operations + OP % Increase	-3.5%	21.4%	11.8%	4.0%	4.7%	0.7%	0.6%	6.1%	11.7%	3.2%	1.2%	3.2%
Operating Transfers In/(Out)	(1,414)	(4,273)	(4,678)	(2,820)	(5,993)	(3,913)	(1,437)	(659)	52,902	906	296	1,628
Debt Proceeds	52,720	162,771	174,288	187,238	129,588	214,475	274,587	209,075	319,989	319,017	337,032	279,494
Capital Outlay	(132,224)	(218,303)	(286,233)	(264,025)	(221,081)	(414,837)	(511,670)	(457,828)	(568,649)	(457,611)	(507,682)	(486,556)
Total Other Financing Sources/ (Uses)	(80,918)	(59,806)	(116,622)	(79,607)	(97,486)	(204,275)	(238,519)	(249,411)	(195,758)	(137,688)	(170,353)	(205,434)
Balance Available	**32,878**	**4,602**	**(62,434)**	**8,696**	**6,991**	**6,704**	**(717)**	**3,814**	**24,614**	**8,341**	**9,184**	**9,050**
Reserves:												
Restricted Reserves:												
WUE - Rate Stablization Reserve	$23,467	$25,070	$28,333	$30,938	$33,588	$34,541	$36,750	$40,275	$51,930	$55,415	$58,654	$61,973
GP 5 Reserve	$6,615	$7,107	$7,107	$7,107	$7,107	$7,107	$7,107	$7,107	$7,107	$7,107	$7,107	$7,107
San Felipe Emergency Reserve	$3,260	$3,310	$3,360	$3,410	$3,460	$3,510	$3,560	$3,610	$3,660	$3,710	$3,760	$3,810
Revenue Bond Debt Service Reserve	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
State Water Project Tax Reserve	$13,768	$3,132	$1,174	$196	$0	$0	$0	$0	$0	$0	$0	$0
P3 Reserve	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Drought Contingency Reserve	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Supplemental Water Supply Appropo.	$15,077	$15,477	$15,877	$16,277	$16,677	$17,077	$17,477	$17,877	$18,277	$18,677	$19,077	$19,477
SVAWPC Sinking Fund	$1,298	$908	$908	$908	$908	$908	$908	$908	$908	$908	$908	$908
Total Restricted	**$81,485**	**$65,004**	**$66,759**	**$68,836**	**$71,740**	**$73,143**	**$75,801**	**$79,777**	**$91,882**	**$95,817**	**$99,506**	**$103,274**
Committed Reserves:												
Designated for Operating and Capital	$48,922	$92,217	$45,019	$51,638	$55,725	$61,027	$57,651	$57,490	$69,999	$74,405	$79,901	$85,182
Currently Authorized Projects	$39,201	$16,990	($0)	($0)	($0)	($0)	($0)	($0)	($0)	($0)	($0)	($0)
Total Designated Reserves	**$88,123**	**$109,208**	**$45,019**	**$51,638**	**$55,725**	**$61,026**	**$57,651**	**$57,490**	**$69,999**	**$74,405**	**$79,901**	**$85,182**
Total	**$169,608**	**$174,211**	**$111,778**	**$120,474**	**$127,465**	**$134,169**	**$133,452**	**$137,267**	**$161,881**	**$170,222**	**$179,406**	**$188,456**
Debt Service Coverage												
Senior & Parity Debt Service Coverage	4.24	2.54	2.08	2.14	2.12	2.52	2.66	2.62	2.21	1.95	2.05	2.16

North County (Zone W-2) Finances

As mentioned previously, the boundary of North County Zone W-2 was slightly modified based on a comprehensive study to better reflect services and benefits. North County, Zone W-2, is generally defined as the portion of the county north of Metcalf Road. North County accounts for approximately 80 percent of District-managed water consumption, but because of higher charges due to higher North County costs, about 95 percent of the Water Utility Enterprise's revenue.

As shown at the beginning of the financial section in Table 4-2.1, the maximum proposed groundwater production charge for M&I or non-agricultural water is $1,506 per acre-foot, which is a 9.6 percent increase versus prior year. Staff recommends increasing the surcharge on treated water delivered under the contracts with retail agencies to $115 per acre-foot, which would result in a total charge of $1,621 per acre-foot for contract treated water for FY 2021–22, or a 10 percent increase compared to FY 2020–21. If adopted by the Board, the average household would experience an increase in their monthly bill ranging from $4.55 to $5.06 or about 15 to 17 cents a day. Customers may also experience additional charge increases enacted by their retail water provider.

As outlined in treated water contracts, Valley Water has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called non-contract treated water, "... at such times and such prices as determined by the District." Staff recommends maintaining the non-contract surcharge at $200 per acre-foot for FY 2021–22. By recommending $200 per acre-foot for the non-contract surcharge, retail customers would be encouraged to pump more groundwater from the groundwater basin, which is currently full, in situations where retailers need more water than their contracted treated water amounts.

The proposed maximum agricultural groundwater production charge is $85.38 per acre-foot for FY 2021-22, which is a 195.8 percent increase or roughly a $9.41 increase per month per acre for the average agricultural water user.

Staff recommends that the surface water master charge be increased from $37.50 per acre-foot to $41.10 per acre-foot to align revenues with costs related to managing, operating and billing for surface water diversions. The increases in the basic user charge and surface water master charge result in a total surface water charge for M&I water of $1,547.10 per acre-foot or up to a 9.6 percent increase. The total surface water charge for agricultural water represents up to a 90.6 percent increase at $126.48 per acre-foot.

To ease the burden on proposed groundwater production charge increases, staff recommends setting the SWP tax collection for FY 2021–22 at $26 million. Valley Water incurs an annual indebtedness to the State of California pursuant to its Water Supply Contract dated November 20, 1961. Such indebtedness is proportional to Valley Water's allocation of water from the SWP and pays for construction, maintenance and operation of SWP infrastructure and facilities. Staff anticipates that Valley Water's contractual indebtedness to the State under the State Water Supply Contract for FY 2021–22 will be approximately $28 million. Not levying the SWP tax in FY 22 would result in revenue loss equivalent to $136 per AF in terms of the North County Zone W-2 M&I groundwater production charge. In the South County, not levying the SWP tax in FY 22 would result in M&I groundwater production charge revenue loss equivalent to $35 per AF in Zone W-5, $48 per AF in Zone W-7 and $24 per AF in Zone W-8. In terms of the Open Space Credit, if the SWP tax was not levied revenue loss would be equivalent to $807,000. (See Page 67 for further information on the Open Space Credit).

Out of an abundance of caution, staff continues to recommend that the Board not consider use of the SWP tax to pay for the SWP portion of Delta Conveyance until after there is legal certainty that Delta Conveyance is authorized to be financed and repaid for through past SWP or CVP bon acts and voter approvals. If the Board were to direct staff to pay for the State Water Project portion of the Delta Conveyance with the SWP tax instead of with water charges, then the groundwater charge projection shown in the report would be reduced accordingly, and the average annual SWP tax bill for a single family residence could increase by as much as $16 per year by FY 2030-31. Today, the average annual SWP tax bill is approximately $28 per year based on the average assessed value of a single-family residence in Santa Clara County of roughly $812,000.

Table 4-6.2 shows the relationship between expenditures and the sources of revenue in North County, Zone W-2. The proposed groundwater production charges for FY 2021–22 are necessary to conduct “district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this State” (District Act, Section 26.3).

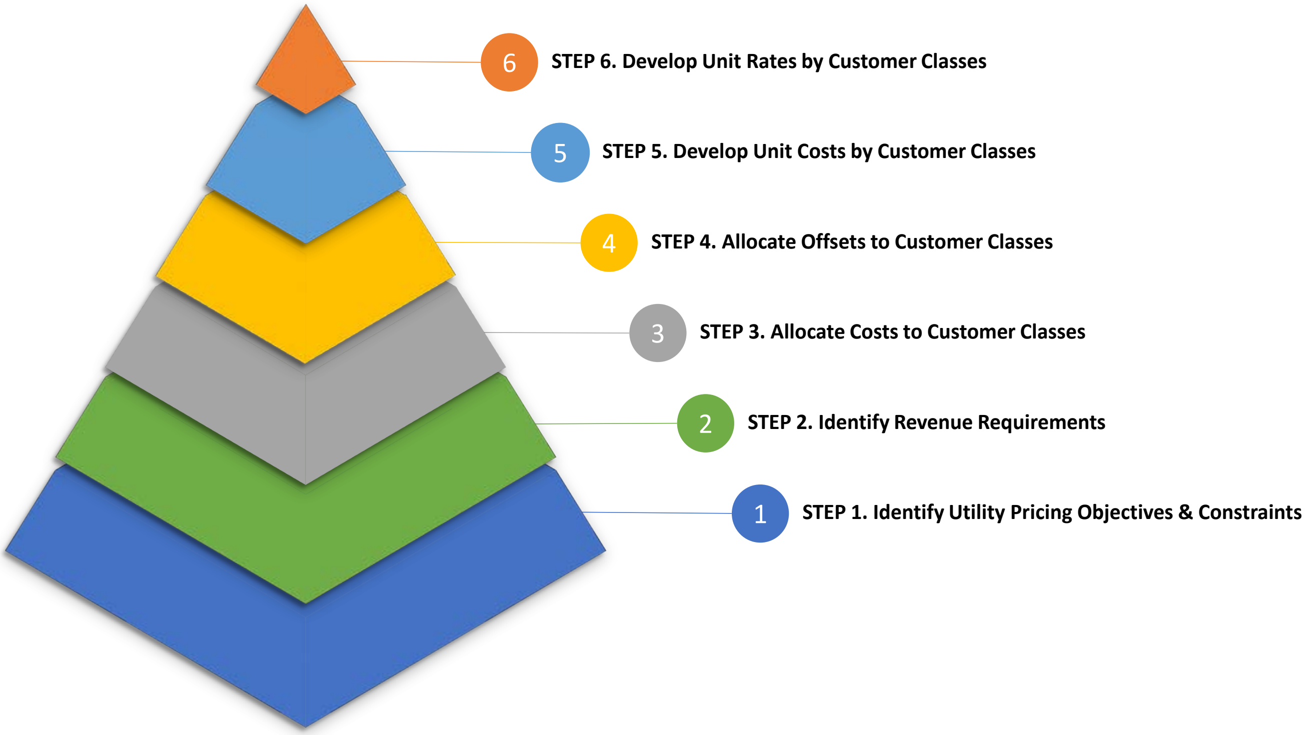
Table 4-6.2 Fiscal Year 2021–22 North County Water Utility Water Program Requirements and Financing Sources

Cost Center	Ends Policy	FY 22 Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	111,362	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	14,040	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	48,967	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.
Administration & General	Support Services	25,750	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Debt Service	52,561	Principal and Interest payments on outstanding debt
	Capital Improvements	289,629	Capital Improvement Program
	Open Space Credit	6,881	Help preserve the open space benefits provided by agricultural lands
	Adjust for FY 19 Actuals Versus Plan	(51,537)	
	Total Program Requirements	**497,652**	
	Financing Sources		
	Capital Cost recovery	6,323	
	Debt Proceeds	174,288	
	Interest & Other	3,568	
	Property Tax	31,727	
	Treated Water Sales	151,102	
	Surface Water Charges	2,128	
	Groundwater Production Charges	120,440	
	Capital Carryforward Reserves	16,990	
	Change in Reserves	(8,915)	
	Total Financing Sources	**497,652**	

Figure 4-6.3 and Table 4-6.3 show the cost of service analysis by customer class following six industry standard rate making steps:

1. Identify utility pricing objectives and constraints
2. Identify revenue requirements
3. Allocate costs to customer classes
4. Reduce costs by revenue offsets or non-rate related funding sources
5. Develop unit costs by customer class or net revenue requirements by customer class
6. Develop unit rates by customer class

Figure 4-6.3 Industry Standard Rate Making Steps


6
STEP 6. Develop Unit Rates by Customer Classes
5
STEP 5. Develop Unit Costs by Customer Classes
4
STEP 4. Allocate Offsets to Customer Classes
3
STEP 3. Allocate Costs to Customer Classes
2
STEP 2. Identify Revenue Requirements
1
STEP 1. Identify Utility Pricing Objectives & Constraints

Water Utility pricing objectives and constraints are identified in Resolution 99-21, the District Act, Proposition 218, Proposition 26, and existing contracts.

Line 11 in Table 4-6.3 represents rate making steps 2 and 3 summarizing the revenue requirements for North County Modified Zone W-2 including operations costs, capital costs and debt service. Step 2 involves allocating water utility costs between zones W-2 (North County) and W-5, W-7, & W-8 (South County) according to the benefits provided in each zone. Appendix B shows the percentage of operations costs allocated to the South County, along with a brief description of the basis of the allocation. Appendix C shows the percentage of capital and debt service costs allocated to South County along with a brief description of the basis of the allocations. Costs not allocated to the South County are allocated to the North County. Step 3 involves allocating costs directly to each customer class where possible or allocating based on volume where the program services benefit multiple customer classes.

Line 29 in Table 4-6.3 represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each zone and customer class where possible or allocated based on volume where the offset applies to multiple customer classes. FY 2021–22 unit costs include an adjustment for the reconciliation of FY 2018–19 actual costs and revenues against what should have been collected given actual costs.

Line 39 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water (SW) and groundwater (GW) supplies conjunctively to prevent the over use or under use of the groundwater basin. First, non-rate related revenues are offset against the cost of agricultural water. This is referred to as the “Open Space Credit.” The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment involves reallocating the cost of treated water to groundwater and surface water users based on proportional water usage. Importing water into the county for treatment and subsequent distribution to treated water (TW) users offsets the need to pump water from the ground. Without treated imported water supplies, the groundwater basin would become over drafted, which would also impact surface water users (who are permitted to take surface water in-lieu of pumping it from the ground). Consequently, the reallocation of treated water cost represents the value of treated water to groundwater and surface water users and facilitates a pricing structure that prevents the overuse of the groundwater basin. The 2011 RFC report[15] mentioned earlier in the section supports the reasonableness of such an adjustment.

Another aspect of the second adjustment is related to setting the basic user charge for surface water equal to the groundwater production charge. Surface water use is effectively in-lieu groundwater use permitted by the district to help preserve the groundwater basin. As such, the costs related to preserving the groundwater basin provide value to surface water users because it makes available district surface water, which otherwise would only be used for groundwater recharge. Similarly, the costs related to providing surface water benefit groundwater users because surface water usage helps preserve the groundwater basin. The second adjustment reallocates cost between surface water and groundwater customers in order to set the basic user charge for surface water equal to the groundwater production charge in recognition of this conjunctive use relationship, and in accordance with board policy.

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[15] The RFC reports, dated March 5, 2010, February 17, 2011, February 27, 2015, and February 28, 2020 can be found at: https://www.valleywater.org/ProposedWaterCharges.

Table 4-6.3 FY 2021–22 North County Modified Zone W-2 Cost of Service by Customer Class

	FY '22 Projection ($ in Thousands)	Zone W-2					
		GW		TW	SW		Total W-2
		M&I	AG	M&I	M&I	Ag	
1	**Operating Outlays**						
2	Operations/Operating Projects	53,950	400	116,648	1,470	41	172,509
3	SWP Imported Water Costs	6,710	50	20,509	331	9	27,609
4	Debt Service	12,766	95	39,535	161	4	52,561
5	**Total Operating Outlays**	73,426	545	176,691	1,962	55	252,679
6	Step 2- Identify revenue reqmnts						
7	**Capital & Transfers**						
8	Operating Transfers Out	1,550	12	1,808	27	1	3,397
9	Capital Outlays excl. carryforward	101,778	757	164,934	1,725	48	269,242
10	**Total Capital & Transfers**	103,328	769	166,742	1,752	49	272,639
11	**Total Annual Program Costs**	176,754	1,314	343,433	3,714	103	525,318
12		Step 3 - Allocate costs to customer classes					
13	**Revenue Requirement Offsets**						
14	Capital Cost Recovery	(2,886)	(21)	(3,365)	(50)	(1)	(6,323)
15	Debt Proceeds	(65,884)	(490)	(106,766)	(1,117)	(31)	(174,288)
16	Inter-governmental Services	(536)	(4)	(625)	(9)	(0)	(1,174)
17	SWP Property Tax	(5,940)	(44)	(18,155)	(293)	(8)	(24,440)
18	South County Deficit/Reserve	447	3	521	8	0	979
19	Interest Earnings Step 4- Reduce costs by revenue offsets	(653)	(5)	(761)	(11)	(0)	(1,430)
20	Inter-zone Interest	79	1	92	1	0	173
21	Capital Contributions	(207)	(2)	(241)	(4)	(0)	(453)
22	Other	(808)	(6)	(867)	(14)	(0)	(1,695)
23	Reserve Requirements	2,362	(128)	6,649	40	(8)	8,915
24	**Adjusted Revenue Requirement (FY 22)**	**102,730**	**618**	**219,915**	**2,266**	**54**	325,582
25	**Adjusted Revenue Requirement (FY 19 adj)**	(21,532)	(212)	(30,448)	684	(29)	(51,537)
26							
27	**Total Adjusted Revenue Requirement**	**81,198**	**405**	**189,466**	**2,950**	**25**	274,045
28	Volume (KAF)	79.9	0.6	93.2	1.4	0.0	175.2
29							
30	Revenue Requirement ($ per AF)	$ 1,016	$ 682	$ 2,033	$ 2,150	$ 647	
31		Step 5 - Develop unit costs by customer class					
32	**Adjustments for Agricultural Preservation**						
33	Allocate WU 1% Ad Valorem Prop Tax	-	(355)	-	-	(20)	(375)
34	Transfer GF 1% Ad valorem Prop Tax	-	-	-	-	-	-
35	Transfer WS 1% Ad Valorem Prop Tax	-	-	-	-	-	-
36	Revenue Requirement ($ per AF)	$ 1,015.7	$ 85.4	$ 2,033	$ 2,150	$ 126.5	
37	Step 6 - Rate Design						
38	**Adjustments to Facilitate Conjunctive Use**						
39	Reallocate TW/SW/RW costs	39,191	-	(38,364)	(827)	-	0
40	Water Charge ($ per AF)	$ 1,506	$ 85.38	$ 1,621	$ 1,547.10	$ 126.48	$ -
41	Total Revenue ($K)	$120,389	$51	$151,102	$2,123	$5	$273,670

South County (Zones W-5, W-7, & W-8) Finances

As mentioned previously, the South County Zone was partitioned effective July 1, 2020 into three zones based on a comprehensive study to better reflect services and benefits. South County Zone W-5 is generally defined as the area overlaying the Llagas groundwater subbasin in the southern portion of Santa Clara County including Gilroy, San Martin and most of Morgan Hill. Zone W-7 overlays the Coyote Valley south of Metcalf Road, and Zone W-8 includes areas below Uvas and Chesbro Reservoirs. Within the Water Utility Fund, Valley Water staff track revenue and costs associated with the South County groundwater benefit zones separately so that a groundwater production charge for services that benefit each South County zone can be calculated.

Charges in the South County zones are based on the costs of specific facilities, imported water costs, and operations costs related to managing a conjunctive use program, ensuring water quality, and measuring water supplies and usage. Historically, South County finances have been managed to maintain an approximate balance between cumulative revenues and costs. However, going forward, staff believe that maintaining a cumulative surplus or reserve balance would be prudent to provide a funding source for future costs.

For the South County Zone W-5, staff proposes up to a 4.6 percent increase, or a $488.50 per acre-foot groundwater production charge for M&I or non-agricultural water. The average household would experience an increase in their monthly bill of $0.74 or about 3 cents per day.

For the South County Zone W-7, staff proposes up to a 10.3 percent increase, or a $530.50 per acre-foot groundwater production charge for M&I or non-agricultural water. The average household would experience an increase in their monthly bill of $1.70 or about 6 cents per day.

For the South County Zone W-8, staff proposes up to a 4.4 percent increase, or a $341.50 per acre-foot groundwater production charge for M&I or non-agricultural water. The average household would experience an increase in their monthly bill of $0.50 or about 2 cents per day.

Customers in each zone may also experience additional water charge increases enacted by their retail water provider.

The proposed maximum agricultural groundwater production charge in any groundwater benefit zone is $85.38 per acre-foot for FY 2021-22, which is up to a 195.8 percent increase, or roughly a $9.41 increase per month per acre for the average agricultural water user.

Staff recommends that the surface water master charge be increased from $37.50 per acre-foot to $41.10 per acre-foot to align revenues with costs related to managing, operating and billing for surface water diversions. The increases in the basic user charge and surface water master charge result in a total surface water charge for M&I water as follows: $529.60 per acre-foot, or an up to 5 percent increase for Zone W-5; $571.60 per acre-foot, or an up to 10.2 percent increase for

Zone W-7; and $328.60 per acre-foot, or an up to 5 percent increase for Zone W-8. The total surface water charge for agricultural water represents up to a 90.6 percent increase at $126.48 per acre-foot.

For recycled water, staff recommends increasing the M&I charge up to 4.8 percent to $468.50 per acre-foot. For agricultural recycled water, the proposed maximum is a 100.5 percent increase to $112.78 per acre-foot. This pricing is consistent with the provisions of the "Wholesale-Retailer Agreement for Supply of Recycled Water Between Santa Clara Valley Water District and City of Gilroy."[16] The proposed rate changes maximize cost recovery while concurrently providing an economic incentive to use recycled water.

For FY 2021-22, costs are estimated to exceed revenues by approximately $1.5 million for the three South County groundwater benefit zones in aggregate. However, Figure 4-6.4 shows a cumulative revenue surplus in FY 2021-22, which is projected to grow in subsequent years. The projected revenue surplus could help pay for potential dam seismic work at Uvas and Chesbro dams. The projection assumes an average increase in the M&I groundwater charge between FY 2021–22 and FY 2030–31 of 4.6 percent for Zone W-5, 10.3 percent for zone W-7, and 4.4 percent for Zone W-8.

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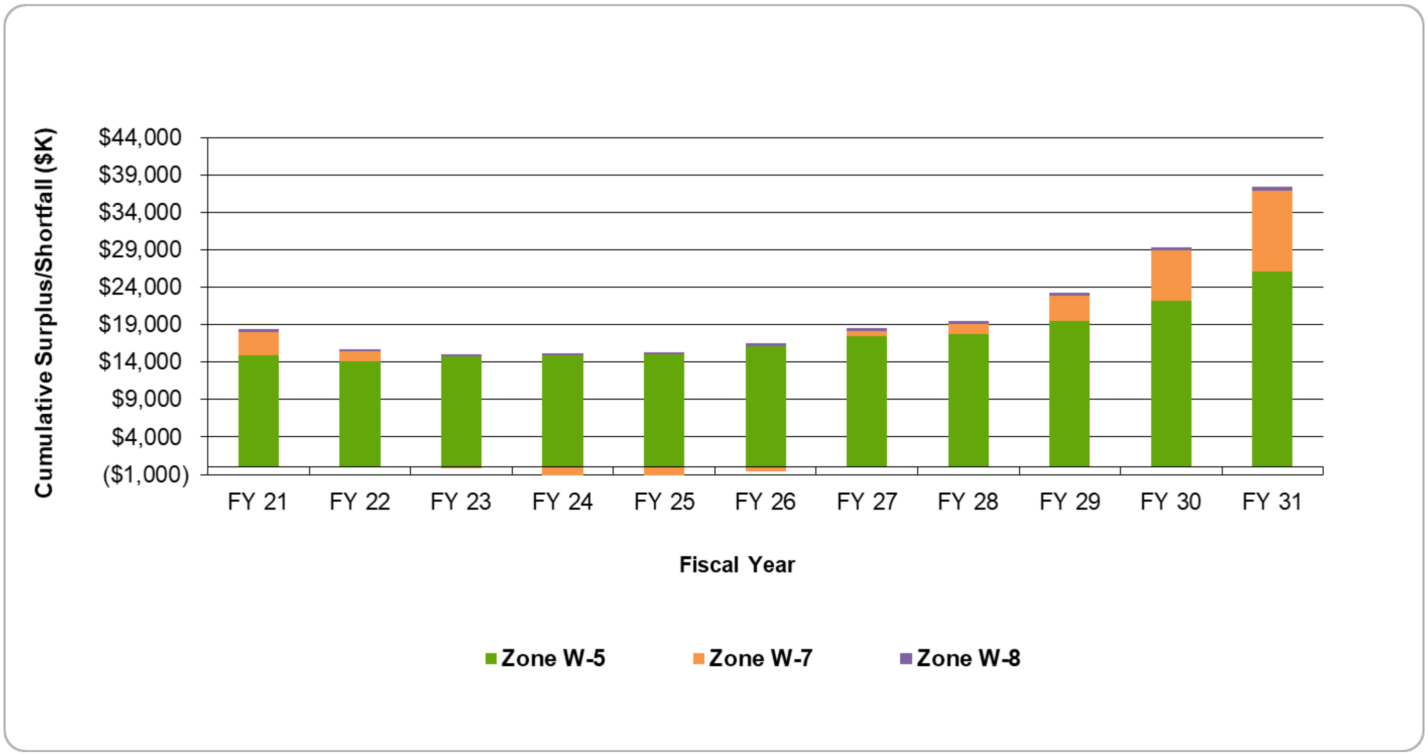
[16] The Wholesale-Retailer Agreement for Supply of Recycled Water Between Santa Clara Valley Water District and City of Gilroy can be accessed at https://www.valleywater.org/ProposedWaterCharges.

Figure 4-6.4 South County Cumulative Revenue Surplus / Shortfall Projection ($/Thousands)



Open Space Credit

The District Act limits agricultural groundwater production charges to a maximum of 25 percent of the M&I groundwater production charges. The agricultural community benefits from the current Board policy limiting the agricultural groundwater charge to no more than 10% of the M&I charge. The credit to agricultural water users has become known as the "open space credit." It is paid for by fungible non-rate related revenue (i.e. 1% ad valorem property taxes). The purpose of the open space credit is to help preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

In April 2019, the Board directed staff to maintain the open space credit as is for two years (FY 2019-20 and FY 2020-21). During the two-year period, a coalition of agricultural organizations and other interested organizations with support from Valley Water, would work to pursue alternative revenue sources to replace the discretionary portion of the open space credit. Consequently, beginning in FY 2021-22, with the elimination of the discretionary portion of the open space credit, the agricultural groundwater charge would be set at the maximum of 25% of the South County Zone W-8 M&I groundwater charge.

The elimination of the discretionary portion of the open space credit would preserve non-rate related revenue for other Valley Water activities like flood protection. The non-discretionary portion of the Open Space Credit would continue to provide 75% financial assistance to the agricultural community.

For FY 2021-22, in accordance with Board direction on the open space credit provided in April 2019, the staff proposed maximum is based on the elimination of the discretionary portion of the open space credit, which means the agricultural groundwater charge would be set at the maximum of 25% of the South County Zone W-8 M&I groundwater production charge. The resulting agricultural groundwater production charge for FY 2021–22 would be $85.38 per acre-foot in Zone W-8. For the sake of consistency, staff proposes that the FY 2021-22 agricultural groundwater charge also be $85.38 per acre-foot for Zones W-2, W-5 and W-7. Accordingly, the estimated open space credit received by the South County groundwater benefit zones would be $7.23 million for FY 2021–22 (funded by 1 percent ad valorem property taxes). This includes an adjustment that reconciles FY 2018–19 actuals against what was projected.

Program Requirements and Financing Sources

Tables 4-6.4a, b, and c show the relationship between expenditures and sources of revenue for the three South County zones in aggregate for FY 2021–22. The specific operating costs allocated to the South County zones can be found in Appendix B. Details on capital cost recovery can be found in Appendix C. The maximum groundwater production charges proposed for FY 2021–22 in the South County Zones W-5, W-7, and W-8 are necessary to conduct, “district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this State” (District Act, Section 26.3).

Table 4-6.4a Fiscal Year 2021–22 South County Zone W-5 Water Utility Program Requirements and Financing Sources

Cost Center	Ends Policy	Zone W-5 FY 22 Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	7,905	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	2,562	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	445	These cost centers contain all expenditures associated with the Water Quality Laboratory
Administration & General	Support Services	5,076	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Capital Cost Recovery	4,587	Annual payment for completed capital facilities and improvements
	Interest (Earned)/Due Utility Reserves	(132)	Based on cumulative revenue surplus at the current interest earnings rate
	Adjust for FY 19 Actuals Versus Plan	(2,269)	
	Total Program Requirements	18,174	
	Financing Sources		
	Open Space Credit	4,139	
	Property Tax & Other Revenue	2,655	
	Surface Water Charges	275	
	Recycled Water Charges	362	
	Groundwater Production Charges	11,331	
	Total Financing Sources	**18,761**	
	FY 22 Revenue Surplus/(Shortfall)	**587**	

Table 4-6.4b Fiscal Year 2021–22 South County Zone W-7 Water Utility Program Requirements and Financing Sources

Cost Center	Ends Policy	Zone W-7 FY 22 Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	5,002	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	1,357	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	32	These cost centers contain all expenditures associated with the Water Quality Laboratory
Administration & General	Support Services	1,541	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Capital Cost Recovery	1,716	Annual payment for completed capital facilities and improvements
	Interest (Earned)/Due Utility Reserves	(38)	Based on cumulative revenue surplus at the current interest earnings rate
	Adjust for FY 19 Actuals Versus Plan	(498)	
	Total Program Requirements	9,111	
	Financing Sources		
	Open Space Credit	1,432	
	Property Tax & Other Revenue	799	
	Surface Water Charges	82	
	Recycled Water Charges	-	
	Groundwater Production Charges	5,229	
	Total Financing Sources	**7,543**	
	FY 22 Revenue Surplus/(Shortfall)	**(1,568)**	

Table 4-6.4c Fiscal Year 2021–22 South County Zone W-8 Water Utility Program Requirements and Financing Sources

Cost Center	Ends Policy	Zone W-8 FY 22 Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	103	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	12	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	2	These cost centers contain all expenditures associated with the Water Quality Laboratory
Administration & General	Support Services	201	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Capital Cost Recovery	20	Annual payment for completed capital facilities and improvements
	Interest (Earned)/Due Utility Reserves	(3)	Based on cumulative revenue surplus at the current interest earnings rate
	Adjust for FY 19 Actuals Versus Plan	(53)	
	Total Program Requirements	282	
	Financing Sources		
	Open Space Credit	29	
	Property Tax & Other Revenue	62	
	Surface Water Charges	33	
	Recycled Water Charges	-	
	Groundwater Production Charges	161	
	Total Financing Sources	**285**	
	FY 22 Revenue Surplus/(Shortfall)	**2**	

Figure 4-6.3 and Table 4-6.5a, b, and c show the cost of service analysis by customer class following the six industry standard rate making steps for South County Zones W-5, W-7, and W-8:

1. Identify utility pricing objectives and constraints
2. Identify revenue requirements
3. Allocate costs to customer classes
4. Reduce costs by revenue offsets or non-rate related funding sources
5. Develop unit costs by customer class or net revenue requirements by customer class
6. Develop unit rates by customer class

Line 11 in Tables 4-6.5a, b, and c represents rate making steps 2 and 3 summarizing the revenue requirements for South County Zones W-5, W-7, and W-8. Costs have been allocated directly to each customer class where possible or allocated based on volume where the costs benefit multiple customer classes.

Line 29 in Tables 4-6.5a, b, and c represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each customer class where possible or allocated based on volume where the offset applies to multiple customer classes. FY 2021–22, unit costs include an adjustment for the reconciliation of FY 2018–19 actual costs and revenue against what should have been collected given actual costs.

Line 39 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water and groundwater supplies conjunctively to prevent the over use or under use of the groundwater basin. First, non-rate related revenues are offset against the cost of agricultural water. This is referred to as the “Open Space Credit”. The purpose of the credit is to help preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment is related to setting the basic user charge for surface water equal to the groundwater production charge. Surface water use is effectively in-lieu groundwater use permitted by Valley Water to help preserve the groundwater basin. As such, the costs related to preserving the groundwater basin provide value to surface water users because it makes available surface water which otherwise would only be used for groundwater recharge. Similarly, the costs related to providing surface water benefit groundwater users because surface water usage helps preserve the groundwater basin. The second adjustment reallocates cost between surface water and groundwater customers in order to set the basic user charge for surface water equal to the groundwater production charge in recognition of this conjunctive use relationship, and in accord with board policy. The 2015 RFC report[17] mentioned earlier in the section supports the reasonableness of these recycled and surface water conjunctive use adjustments.

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[17] The RFC reports, dated March 5, 2010, February 17, 2011, February 27, 2015, and February 28, 2020 can be found at: https://www.valleywater.org/ProposedWaterCharges.

Another aspect of the second adjustment involves reallocating the cost of recycled water (RW) to groundwater and surface water users in Zone W-5 only. Without recycled water supplies, there would be additional demand on the groundwater basin and a higher risk of overdraft, which would also impact surface water users (who are permitted to take surface water in lieu of pumping it from the ground). Consequently, the reallocation of recycled water cost represents the value of recycled water to groundwater and surface water users and facilitates a pricing structure that helps prevent the overuse of the groundwater basin.

Table 4-6.5a FY 2021–22 South County Zone W-5 Cost of Service by Customer Class

	FY '22 Projection ($ in Thousands)	Zone W-5						
		GW		SW		RW		Total W-5
		M&I	AG	M&I	AG	M&I	AG	
1	**Operating Outlays**							
2	Operations/Operating Projects	7,102	7,880	167	431	219	188	**15,988**
3	SWP Imported Water Costs	-	-	-	-	-	-	**-**
4	Debt Service	-	-	-	-	-	-	**-**
5	**Total Operating Outlays**	7,102	7,880	167	431	219	188	**15,988**
6								
7	**Capital & Transfers**							
8	Operating Transfers Out	-	-	-	-	-	-	**-**
9	Capital Outlays excl. carryforward	-	-	-	-	-	-	**-**
10	**Total Capital & Transfers**	-	-	-	-	-	-	**-**
11	**Total Annual Program Costs**	7,102	7,880	167	431	219	188	**15,988**
12								
13	**Revenue Requirement Offsets**							
14	Capital Cost Recovery	1,388	1,561	23	60	838	718	**4,587**
15	Debt Proceeds	-	-	-	-	-	-	**-**
16	Inter-governmental Services	(37)	(41)	(1)	(2)	-	-	**(80)**
17	SWP Property Tax	(528)	(594)	(9)	(23)	(17)	(15)	**(1,186)**
18	South County Deficit/Reserve	1,491	(580)	(34)	(22)	(252)	(15)	**587**
19	Interest Earnings	-	-	-	-	-	-	**-**
20	Inter-zone Interest	(59)	(66)	(1)	(3)	(2)	(2)	**(132)**
21	Capital Contributions	-	-	-	-	-	-	**-**
22	Other	(65)	(73)	(1)	(1)	(1)	(1)	**(142)**
23	Reserve Requirements	-	-	-	-	-	-	**-**
24	**Adjusted Revenue Requirement (FY 22)**	**9,292**	**8,087**	**145**	**440**	**784**	**874**	**19,623**
25	**Adjusted Revenue Requirement (FY 19 adj)**	(544)	(1,552)	26	(115)	235	(320)	**(2,269)**
26								
27	**Total Adjusted Revenue Requirement**	**8,749**	**6,535**	**171**	**326**	**1,019**	**554**	**17,353**
28	Volume (KAF)	19.4	21.8	0.3	0.8	0.6	0.5	**43.5**
29								
30	Revenue Requirement ($ per AF)	$ 451	$ 300	$ 534	$ 391	$ 1,592	$ 1,009	
31								
32	**Adjustments for Agricultural Preservation**							
33	Allocate WU 1% Ad Valorem Prop Tax	-	(4,673)	-	(221)	-	(492)	**(5,386)**
34	Transfer GF 1% Ad valorem Prop Tax	-	-	-	-	-	-	**-**
35	Transfer WS 1% Ad Valorem Prop Tax	-	-	-	-	-	-	**-**
36	Revenue Requirement ($ per AF)	$ 451	$ 85.4	$ 534	$ 126.5	$ 1,592	$ 112.8	
37								
38	**Adjustments to Facilitate Conjunctive Use**							
39	Reallocate TW/SW/RW costs	721	-	(1)	-	(719)	-	**-**
40	Water Charge ($ per AF)	$ 488.50	$ 85.38	$ 529.60	$ 126.48	$ 468.50	$ 112.78	
41	Total Revenue ($K)	$9,469	$1,862	$170	$105	$300	$62	**$11,968**

Step 2- Identify revenue reqmnts

Step 3 - Allocate costs to customer classes

Step 4- Reduce costs by revenue offsets

Step 5 - Develop unit costs by customer class

Step 6 - Rate Design

Table 4-6.5b FY 2021–22 South County Zone W-7 Cost of Service by Customer Class

	FY '22 Projection ($ in Thousands)	Zone W-7				
		GW		SW		Total W-7
		M&I	AG	M&I	AG	
1	**Operating Outlays**					
2	Operations/Operating Projects	5,722	1,783	119	308	**7,932**
3	SWP Imported Water Costs	-	-	-	-	**-**
4	Debt Service	-	-	-	-	**-**
5	**Total Operating Outlays**	5,722	1,783	119	308	**7,932**
6						
7	**Capital & Transfers**					
8	Operating Transfers Out	-	-	-	-	**-**
9	Capital Outlays excl. carryforward	-	-	-	-	**-**
10	**Total Capital & Transfers**	-	-	-	-	**-**
11	**Total Annual Program Costs**	5,722	1,783	119	308	**7,932**
12						
13	**Revenue Requirement Offsets**					
14	Capital Cost Recovery	1,272	400	12	32	**1,716**
15	Debt Proceeds	-	-	-	-	**-**
16	Inter-governmental Services	(46)	(15)	(0)	(1)	**(62)**
17	SWP Property Tax	(254)	(80)	(2)	(6)	**(343)**
18	South County Deficit/Reserve	(1,474)	(78)	(10)	(6)	**(1,568)**
19	Interest Earnings	-	-	-	-	**-**
20	Inter-zone Interest	(28)	(9)	(0)	(1)	**(38)**
21	Capital Contributions	-	-	-	-	**-**
22	Other	(24)	(7)	(0)	(0)	**(31)**
23	Reserve Requirements	-	-	-	-	**-**
24	**Adjusted Revenue Requirement (FY 22)**	**5,167**	**1,994**	**118**	**326**	**7,605**
25	**Adjusted Revenue Requirement (FY 19 adj)**	(263)	(210)	7	(33)	**(498)**
26						**-**
27	**Total Adjusted Revenue Requirement**	**4,904**	**1,784**	**126**	**293**	**7,107**
28	Volume (KAF)	9.4	2.9	0.1	0.2	**12.7**
29						
30	Revenue Requirement ($ per AF)	$ 523	$ 605	$ 1,374	$ 1,232	
31						
32	**Adjustments for Agricultural Preservation**					
33	Allocate WU 1% Ad Valorem Prop Tax	-	(1,532)	-	(263)	**(1,795)**
34	Transfer GF 1% Ad valorem Prop Tax	-	-	-	-	**-**
35	Transfer WS 1% Ad Valorem Prop Tax	-	-	-	-	**-**
36	Revenue Requirement ($ per AF)	$ 523	$ 85.3	$ 1,374	$ 126.4	
37						
38	**Adjustments to Facilitate Conjunctive Use**					
39	Reallocate TW/SW/RW costs	73	-	(73)	-	**-**
40	Water Charge ($ per AF)	$ 530.50	$ 85.38	$ 571.60	$ 126.48	
41	Total Revenue ($K)	$4,978	$252	$52	$30	**$5,312**

Step 2- Identify revenue reqmnts

Step 3 - Allocate costs to customer

Step 4- Reduce costs by revenue offsets

Step 5 - Develop unit costs by customer class

Step 6 - Rate Design

Table 4-6.5c FY 2021–22 South County Zone W-8 Cost of Service by Customer Class

	FY '22 Projection ($ in Thousands)	Zone W-8					Total South County
		GW		SW		Total W-8	
		M&I	AG	M&I	AG		
1	**Operating Outlays**						
2	Operations/Operating Projects	126	144	14	35	**318**	**24,239**
3	SWP Imported Water Costs	-	-	-	-	**-**	**-**
4	Debt Service	-	-	-	-	**-**	**-**
5	**Total Operating Outlays**	126	144	14	35	**318**	**24,239**
6							
7	**Capital & Transfers**						
8	Operating Transfers Out	-	-	-	-	**-**	**-**
9	Capital Outlays excl. carryforward	-	-	-	-	**-**	**-**
10	**Total Capital & Transfers**	-	-	-	-	**-**	**-**
11	**Total Annual Program Costs**	126	144	14	35	**318**	**24,239**
12							
13	**Revenue Requirement Offsets**						
14	Capital Cost Recovery	8	9	1	3	**20**	**6,323**
15	Debt Proceeds	-	-	-	-	**-**	**-**
16	Inter-governmental Services	(0)	(0)	(0)	(0)	**(1)**	**(143)**
17	SWP Property Tax	(12)	(14)	(1)	(4)	**(31)**	**(1,560)**
18	South County Deficit/Reserve	22	(11)	(5)	(3)	**2**	**(979)**
19	Interest Earnings	-	-	-	-	**-**	**-**
20	Inter-zone Interest	(1)	(1)	(0)	(0)	**(3)**	**(173)**
21	Capital Contributions	-	-	-	-	**-**	**-**
22	Other	(1)	(1)	(0)	(0)	**(3)**	**(176)**
23	Reserve Requirements	-	-	-	-	**-**	**-**
24	**Adjusted Revenue Requirement (FY 22)**	**141**	**124**	**8**	**30**	**303**	**27,531**
25	**Adjusted Revenue Requirement (FY 19 adj)**	(10)	(30)	4	(16)	**(53)**	**(2,821)**
26							
27	**Total Adjusted Revenue Requirement**	**131**	**94**	**12**	**13**	**250**	**24,710**
28	Volume (KAF)	0.4	0.4	0.0	0.1	**1.0**	**57.1**
29							
30	Revenue Requirement ($ per AF)	$ 357	$ 224	$ 255	$ 113		
31							
32	**Adjustments for Agricultural Preservation**						
33	Allocate WU 1% Ad Valorem Prop Tax	-	(58)	-	2	**(57)**	**(7,237)**
34	Transfer GF 1% Ad valorem Prop Tax	-	-	-	-	**-**	**-**
35	Transfer WS 1% Ad Valorem Prop Tax	-	-	-	-	**-**	**-**
36	Revenue Requirement ($ per AF)	$ 357	$ 85.4	$ 255	$ 126.5		
37							
38	**Adjustments to Facilitate Conjunctive Use**						
39	Reallocate TW/SW/RW costs	(6)	-	6	-	**-**	**-**
40	Water Charge ($ per AF)	$ 341.50	$ 85.38	$ 382.60	$ 126.48		
41	Total Revenue ($K)	$125	$36	$18	$15	**$193**	**$17,473**

Step 2- Identify revenue reqmnts

Step 3 - Allocate costs to customer

Step 4- Reduce costs by revenue offsets

Step 5 - Develop unit costs by customer class

Step 6 - Rate Design

APPENDIX A

WATER UTILITY CHARGE COMPONENTS AND PROPOSED CHARGES

Table A-1 Proposed Charge Components for Fiscal Year 2021–22

Component	Charge ($/AF)
Basic User, Zone W-2 (North County)	
Agricultural	85.38
M&I	1,506.00
Basic User, Zone W-5 (South County/Llagas Subbasin)	
Agricultural	85.38
M&I	488.50
Basic User, Zone W-7 (South County/Coyote Valley)	
Agricultural	85.38
M&I	530.50
Basic User, Zone W-8 (South County/Uvas and Chesbro)	
Agricultural	85.38
M&I	341.50
Treated Water Surcharge	
Contract	115.00
Non-contract	200.00
Surface Water Charge	
Water Master	41.10

Table A-2 Proposed Charge Components for Fiscal Year 2021–22

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater Production / Basic User Charge		
Zone W-2	$85.38	**$1,506.00**
Zone W-5	$85.38	**$488.50**
Zone W-7	$85.38	**$530.50**
Zone W-8	$85.38	**$341.50**
Surface Water[1]		
Other Zone W-2 Deliveries[2]	$126.48	**$1,547.10**
Other Zone W-5 Deliveries[3]	$126.48	**$529.60**
Other Zone W-7 Deliveries[4]	$126.48	**$571.60**
Other Zone W-8 Deliveries[5]	$126.48	**$382.60**
Minimum Charge Zone W-2[6]	$64.03	**$1,129.50**
Minimum Charge Zone W-5[7]	$64.03	**$366.38**
Minimum Charge Zone W-7[8]	$64.03	**$397.88**
Minimum Charge Zone W-8[9]	$64.03	**$256.12**
Treated Water Contract[10]	N/A N/A	**$1,621.00**
Non-contract[11]		**$1,706.00**
Recycled Water		
Gilroy	$112.78	**$468.50**

[1] Surface water charge is the sum of the basic user charge plus the water master charge.
[2] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $85.38/AF or $1,506.00/AF) + Water Master ($41.10/AF).
[3] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $85.38/AF or $488.50/AF) + Water Master ($41.10/AF).
[4] Other Zone W-7 Deliveries = Basic User (AG or M&I @ $85.38/AF or $530.50/AF) + Water Master ($41.10/AF).
[5] Other Zone W-8 Deliveries = Basic User (AG or M&I @ $85.38/AF or $341.50/AF) + Water Master ($41.10/AF).
[6] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $1,506.00/AF, AG @ $85.38/AF).
[7] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $488.50/AF, AG @$85.38/AF).
[8] Minimum Charge W-7 = 0.75 X Basic User W-7 (M&I @ $530.50/AF, AG @$85.38/AF).
[9] Minimum Charge W-5 = 0.75 X Basic User W-8 (M&I @ $341.50/AF, AG @$85.38/AF).
[10] Treated Water Charge is the sum of Basic User ($1,506.00/AF) and Treated Water Surcharge ($115.00/AF).
[11] The charge for non-contract deliveries is the sum of the basic user charge ($1,506.00/AF) and the treated water surcharge for non-contract water ($200.00/AF).

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Source of Supply	Water Operations Planning	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Groundwater Management Program	34.2%	9.1%	0.9%	44.2%	55.8%	100%	Groundwater Production Ratio
	Districtwide Salary Savings	17.6%	5.0%	0.4%	23.0%	77.0%	100%	Water Usage Ratio
	Facilities Environmental Compliance	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Dam Safety Program	20.2%	1.8%	0.4%	22.4%	77.6%	100%	Program Benefit Calculation
	Recycled & Purified Water Program	6.5%	0.0%	0.0%	6.5%	93.5%	100%	Population
	Water Rights	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Imported Water Program	4.9%	5.9%	0.0%	10.7%	89.3%	100%	Imported Water Ratio
	IW San Felipe Division Deliveries	7.8%	9.5%	0.0%	17.3%	82.7%	100%	Program Benefit Calculation
	IW South Bay Aqueduct Deliveries	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	State Water Project Costs	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Water Conservation Program	8.7%	0.4%	0.4%	9.5%	90.5%	100%	Program Benefit Calculation
	Recycled/Purified Water Public Engagement	6.5%	0.0%	0.0%	6.5%	93.5%	100%	Population
	Water Banking Operations	4.9%	5.9%	0.0%	10.7%	89.3%	100%	Imported Water Ratio
	San Felipe Reach 1 Operations	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	SFD Reach 1 Administration	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach1 Ctrl and Ele	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 1 Engineering Other	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 1 Gen Maint	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 2 Operations	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 2 Engineering Other	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 2 Gen Maint	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 3 Operations	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 3 Ctrl and Ele	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 3 Engineering Other	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	San Felipe Reach 3 Gen Maint	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	Transfer-Bethany Pipeline	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Palo Alto Water Reuse Agreement	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	SVAWPC Facility Operations	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	SVAWPC Facility Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Source of Supply	Desalination	17.6%	5.0%	0.4%	23.0%	77.0%	100%	Water Usage Ratio
	Well Ordinance Program	10.0%	3.0%	0.0%	13.0%	87.0%	100%	Well Permits and Inpections
	Source Water Quality Management	17.6%	5.0%	0.4%	23.0%	77.0%	100%	Water Usage Ratio
	Invasive Mussel Prevention	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Delta Conveyance	4.9%	5.9%	0.0%	10.7%	89.3%	100%	Imported Water Ratio
	Local Reservoir/Diversion Planning & Analysis	17.6%	5.0%	0.4%	23.0%	77.0%	100%	Water Usage Ratio
	SCADA Systems Upgrade	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Dams/Reservoir Gen Maint	19.3%	1.8%	0.4%	21.4%	78.6%	100%	Program Benefit Calculation
	San Luis Lowpoint Improvement Program	8.1%	9.8%	0.0%	17.9%	82.1%	100%	CVP Imported Water Ratio
	Adjustments	17.6%	5.0%	0.4%	23.0%	77.0%	100%	Water Usage Ratio
Raw Water Transmission & Distribution	FAHCE/Three Creeks HCP Project	2.7%	3.3%	0.0%	6.0%	94.0%	100%	Coyote Water Supply Ratio
	Facilities Environmental Compliance	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Vasona Pump Station General Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Raw Water T&D Gen'l Oper	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Recycled Water T&D Gen Maint	100.0%	0.0%	0.0%	100.0%	0.0%	100%	Benefits Only South County
	Recharge & Raw Wtr Field Ops	24.3%	12.6%	0.1%	37.0%	63.0%	100%	Groundwater Recharge Ratio
	Recharge & Raw Wtr Field Fac Maint	24.3%	12.6%	0.1%	37.0%	63.0%	100%	Groundwater Recharge Ratio
	Untreated Surface Water Program	29.5%	31.9%	0.9%	62.3%	37.7%	100%	Untreated Water Deliveries Ratio
	SCADA Systems Upgrade	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Raw Water Ctrl & Elec Eng	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Raw Water T&D Eng Other	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	Anderson Hydroelectric Fac Maintenance	8.1%	9.8%	0.0%	17.9%	82.1%	100%	Anderson Water Deliveries Ratio
	Raw Water Trans & Dist Gen Mnt	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries
	RW Corrosion Control	10.6%	5.7%	0.1%	16.4%	83.6%	100%	Raw Water Deliveries

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES ... CONTINUED

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Water Treatment and Treated Water Transmission & Distribution	Environmental Compliance Support	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Treatment Plant Process & Commissioning	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	W T General Water Quality	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Water Treatment Plant - Engineering Other	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	PWTP Operations General	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Penitencia WTP General Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	STWTP - General Operations	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Santa Teresa WTP General Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	RWTP General Operations	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Rinconada WTP General Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Water District Laboratory	7.3%	0.5%	0.0%	7.8%	92.2%	100%	Lab Analyses
	SF/SCVWD Intertie General Operations	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Campbell Wellfield Operations	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Campbell Wellfield Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Treated Water Ctrl & Elec Eng	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	SCADA Systems Upgrade	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	SF/SCVWD Intertie General Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Treated Water T&D IPU Ops Eng	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	SCADA Systems Upgrade	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	Treated Water T&D Gen Maintenance	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit
	TW T&D Corrosion Control	0.0%	0.0%	0.0%	0.0%	100.0%	100%	No South County Benefit

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES ... CONTINUED

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Administration & General	Unscoped Operations Activities	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	WU Asset Protection Support	1.9%	0.6%	0.0%	2.5%	97%	100%	Program Benefit Calculation
	Energy Management	1.2%	0.3%	0.0%	1.5%	98%	100%	Labor Hours
	Grants Management	29.1%	8.4%	0.6%	38.1%	62%	100%	Program Benefit Calculation
	Integrated Regional Water Mgmt	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	Rental Expense San Pedro,MH	100.0%	0.0%	0.0%	100.0%	0%	100%	Benefits only South County
	WUE Administration	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	District Asset Management Framework	17.6%	5.0%	0.4%	23.0%	77%	100%	No South County Benefit
	WUE Technical Training Program	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	Climate Change Adaptation/Mitig	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	Welding Services	1.3%	0.4%	0.0%	1.6%	98%	100%	Program Benefit Calculation
	Office of Integrated Wtr Mgmt	17.6%	5.0%	0.4%	23.0%	77%	100%	Program Benefit Calculation
	Lands Management Program	17.6%	5.0%	0.4%	23.0%	77%	100%	Program Benefit Calculation
	W2 W5 Water Revenue Program	48.0%	14.0%	1.0%	63.0%	37%	100%	Labor Hours
	Water Use Measurement	33.0%	9.5%	0.7%	43.2%	57%	100%	Labor Hours
	LT Financial Planning & Rate S	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	WU Customer Relations&Outreach	6.5%	0.0%	0.0%	6.5%	94%	100%	Population
	Water Supply Planning	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	Water Resources Env Planning & Permitting	4.5%	1.3%	0.1%	5.9%	94%	100%	Program Benefit Calculation
	SCADA Network Administration	10.6%	5.7%	0.1%	16.4%	84%	100%	Raw Water Deliveries
	Emergency Management	6.5%	0.0%	0.0%	6.5%	94%	100%	Population
	Inter Agency Urban Runoff Program	10.6%	5.7%	0.1%	16.4%	84%	100%	Raw Water Deliveries
	HAZMAT Emergency Response	6.2%	0.7%	0.3%	7.2%	93%	100%	Emergency Response Events
	Hydrologic Data Msrmt & Management	5.0%	11.0%	9.0%	25.0%	75%	100%	Stream Gauge Location
	Warehouse Services	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	X Valley Subsidence Survey	4.1%	1.2%	0.1%	5.4%	95%	100%	Program Benefit Calculation
	District Real Property Admin	17.6%	5.0%	0.4%	23.0%	77%	100%	Program Benefit Calculation
	Tree Maintenance Program	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio
	Adjustment for Anticipated Budget Changes	17.6%	5.0%	0.4%	23.0%	77%	100%	Water Usage Ratio

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $)

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Source of Supply	Water Operations Planning	$ 75	$ 41	$ 0	$ 116	$ 592	$ 708	Raw Water Deliveries
	Groundwater Management Program	$ 1,744	$ 463	$ 47	$ 2,254	$ 2,841	$ 5,096	Groundwater Production Ratio
	Districtwide Salary Savings	$ (279)	$ (80)	$ (6)	$ (365)	$ (1,223)	$ (1,588)	Water Usage Ratio
	Facilities Environmental Compliance	$ 5	$ 3	$ 0	$ 8	$ 39	$ 47	Raw Water Deliveries
	Dam Safety Program	$ 376	$ 34	$ 7	$ 418	$ 1,447	$ 1,866	Program Benefit Calculation
	Recycled & Purified Water Program	$ 431	$ -	$ -	$ 431	$ 6,201	$ 6,632	Population
	Water Rights	$ 79	$ 43	$ 0	$ 123	$ 629	$ 752	Raw Water Deliveries
	Imported Water Program	$ 296	$ 359	$ -	$ 655	$ 5,444	$ 6,099	Imported Water Ratio
	IW San Felipe Division Deliveries	$ 2,135	$ 2,592	$ -	$ 4,727	$ 22,662	$ 27,389	Program Benefit Calculation
	IW South Bay Aqueduct Deliveries	$ -	$ -	$ -	$ -	$ 4,286	$ 4,286	No South County Benefit
	State Water Project Costs	$ -	$ -	$ -	$ -	$ 27,609	$ 27,609	No South County Benefit
	Water Conservation Program	$ 651	$ 30	$ 30	$ 711	$ 6,777	$ 7,488	Program Benefit Calculation
	Recycled/Purified Water Public Engagement	$ 91	$ -	$ -	$ 91	$ 1,312	$ 1,404	Population
	Water Banking Operations	$ 357	$ 433	$ -	$ 790	$ 6,566	$ 7,356	Imported Water Ratio
	San Felipe Reach 1 Operations	$ 57	$ 70	$ -	$ 127	$ 582	$ 709	CVP Imported Water Ratio
	SFD Reach 1 Administration	$ 1	$ 1	$ -	$ 1	$ 6	$ 7	CVP Imported Water Ratio
	San Felipe Reach1 Ctrl and Ele	$ 28	$ 34	$ -	$ 62	$ 286	$ 348	CVP Imported Water Ratio
	San Felipe Reach 1 Engineering Other	$ 26	$ 32	$ -	$ 58	$ 267	$ 326	CVP Imported Water Ratio
	San Felipe Reach 1 Gen Maint	$ 83	$ 100	$ -	$ 183	$ 837	$ 1,019	CVP Imported Water Ratio
	San Felipe Reach 2 Operations	$ 7	$ 8	$ -	$ 15	$ 67	$ 82	CVP Imported Water Ratio
	San Felipe Reach 2 Engineering Other	$ 15	$ 18	$ -	$ 33	$ 153	$ 186	CVP Imported Water Ratio
	San Felipe Reach 2 Gen Maint	$ 16	$ 19	$ -	$ 35	$ 159	$ 194	CVP Imported Water Ratio
	San Felipe Reach 3 Operations	$ 1	$ 31	$ -	$ 32	$ 330	$ 362	CVP Imported Water Ratio
	San Felipe Reach 3 Ctrl and Ele	$ 1	$ 30	$ -	$ 31	$ 313	$ 344	CVP Imported Water Ratio
	San Felipe Reach 3 Engineering Other	$ 1	$ 29	$ -	$ 30	$ 306	$ 336	CVP Imported Water Ratio
	San Felipe Reach 3 Gen Maint	$ 47	$ 104	$ -	$ 151	$ 971	$ 1,122	CVP Imported Water Ratio
	Transfer-Bethany Pipeline	$ -	$ -	$ -	$ -	$ 1,523	$ 1,523	No South County Benefit
	Palo Alto Water Reuse Agreement	$ -	$ -	$ -	$ -	$ 3,118	$ 3,118	No South County Benefit
	SVAWPC Facility Operations	$ -	$ -	$ -	$ -	$ 2,881	$ 2,881	No South County Benefit
	SVAWPC Facility Maintenance	$ -	$ -	$ -	$ -	$ 2,678	$ 2,678	No South County Benefit

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $) … CONTINUED

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Source of Supply	Desalination	$ 14	$ 4	$ 0	$ 19	$ 63	$ 82	Water Usage Ratio
	Well Ordinance Program	$ 202	$ 61	$ -	$ 263	$ 1,757	$ 2,020	Well Permits and Inpections
	Source Water Quality Management	$ 77	$ 22	$ 2	$ 101	$ 339	$ 440	Water Usage Ratio
	Invasive Mussel Prevention	$ 82	$ 45	$ 0	$ 127	$ 650	$ 777	Raw Water Deliveries
	Delta Conveyance	$ 238	$ 289	$ -	$ 528	$ 4,383	$ 4,911	Imported Water Ratio
	Local Reservoir/Diversion Planning & Analysis	$ 350	$ 100	$ 7	$ 457	$ 1,532	$ 1,990	Water Usage Ratio
	SCADA Systems Upgrade	$ 12	$ 7	$ 0	$ 19	$ 95	$ 113	Raw Water Deliveries
	Dams/Reservoir Gen Maint	$ 669	$ 61	$ 13	$ 743	$ 2,730	$ 3,473	Program Benefit Calculation
	San Luis Lowpoint Improvement Program	$ 15	$ 18	$ -	$ 33	$ 153	$ 186	CVP Imported Water Ratio
	Adjustments	$ -	$ -	$ -	$ -	$ -		Water Usage Ratio
		$ 7,905	$ 5,002	$ 103	$ 13,009	$ 111,362	$ 124,371	

Cost Center	Project Name	South County Modified Zone W-5 Share	South County New Zone W-7 Share	South County New Zone W-8 Share	South County Share	North County Share	Total FY 2022 Share	Basis of Allocation
Raw Water Transmission & Distribution	FAHCE/Three Creeks HCP Project	$ 119	$ 144	$ -	$ 263	$ 4,138	$ 4,401	Coyote Water Supply Ratio
	Facilities Environmental Compliance	$ 9	$ 5	$ 0	$ 14	$ 71	$ 84	Raw Water Deliveries
	Vasona Pump Station General Maintenance	$ -	$ -	$ -	$ -	$ 220	$ 220	No South County Benefit
	Raw Water T&D Gen'l Oper	$ 193	$ 105	$ 1	$ 299	$ 1,529	$ 1,829	Raw Water Deliveries
	Recycled Water T&D Gen Maint	$ 258	$ -	$ -	$ 258	$ -	$ 258	Benefits Only South County
	Recharge & Raw Wtr Field Ops	$ 779	$ 404	$ 3	$ 1,186	$ 2,015	$ 3,201	Groundwater Recharge Ratio
	Recharge & Raw Wtr Field Fac Maint	$ 535	$ 277	$ 2	$ 814	$ 1,383	$ 2,196	Groundwater Recharge Ratio
	Untreated Surface Water Program	$ 96	$ 103	$ 3	$ 202	$ 122	$ 324	Untreated Water Deliveries Ratio
	SCADA Systems Upgrade	$ 15	$ 8	$ 0	$ 23	$ 120	$ 143	Raw Water Deliveries
	Raw Water Ctrl & Elec Eng	$ 66	$ 36	$ 0	$ 102	$ 519	$ 621	Raw Water Deliveries
	Raw Water T&D Eng Other	$ 128	$ 69	$ 1	$ 198	$ 1,010	$ 1,207	Raw Water Deliveries
	Anderson Hydroelectric Fac Maintenance	$ 12	$ 14	$ -	$ 26	$ 118	$ 144	Anderson Water Deliveries Ratio
	Raw Water Trans & Dist Gen Mnt	$ 280	$ 152	$ 1	$ 434	$ 2,216	$ 2,650	Raw Water Deliveries
	RW Corrosion Control	$ 73	$ 40	$ 0	$ 113	$ 579	$ 692	Raw Water Deliveries
		$ 2,562	$ 1,357	$ 12	$ 3,931	$ 14,040	$ 17,971	

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $) … CONTINUED

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Water Treatment and Treated Water Transmission & Distribution	Environmental Compliance Support	$ -	$ -	$ -	$ -	$ 572	$ 572	No South County Benefit
	Treatment Plant Process & Commissioning	$ -	$ -	$ -	$ -	$ 496	$ 496	No South County Benefit
	W T General Water Quality	$ -	$ -	$ -	$ -	$ 2,505	$ 2,505	No South County Benefit
	Water Treatment Plant - Engineering Other	$ -	$ -	$ -	$ -	$ 420	$ 420	No South County Benefit
	PWTP Operations General	$ -	$ -	$ -	$ -	$ 6,436	$ 6,436	No South County Benefit
	Penitencia WTP General Maintenance	$ -	$ -	$ -	$ -	$ 2,876	$ 2,876	No South County Benefit
	STWTP - General Operations	$ -	$ -	$ -	$ -	$ 6,801	$ 6,801	No South County Benefit
	Santa Teresa WTP General Maintenance	$ -	$ -	$ -	$ -	$ 3,521	$ 3,521	No South County Benefit
	RWTP General Operations	$ -	$ -	$ -	$ -	$ 9,257	$ 9,257	No South County Benefit
	Rinconada WTP General Maintenance	$ -	$ -	$ -	$ -	$ 3,609	$ 3,609	No South County Benefit
	Water District Laboratory	$ 445	$ 32	$ 2	$ 479	$ 5,656	$ 6,135	Lab Analyses
	SF/SCVWD Intertie General Operations	$ -	$ -	$ -	$ -	$ 200	$ 200	No South County Benefit
	Campbell Wellfield Operations	$ -	$ -	$ -	$ -	$ 109	$ 109	No South County Benefit
	Campbell Wellfield Maintenance	$ -	$ -	$ -	$ -	$ 103	$ 103	No South County Benefit
	Treated Water Ctrl & Elec Eng	$ -	$ -	$ -	$ -	$ 3,116	$ 3,116	No South County Benefit
	SCADA Systems Upgrade	$ -	$ -	$ -	$ -	$ 453	$ 453	No South County Benefit
	SF/SCVWD Intertie General Maintenance	$ -	$ -	$ -	$ -	$ 100	$ 100	No South County Benefit
	Treated Water T&D IPU Ops Eng	$ -	$ -	$ -	$ -	$ 633	$ 633	No South County Benefit
	SCADA Systems Upgrade	$ -	$ -	$ -	$ -	$ 45	$ 45	No South County Benefit
	Treated Water T&D Gen Maintenance	$ -	$ -	$ -	$ -	$ 1,493	$ 1,493	No South County Benefit
	TW T&D Corrosion Control	$ -	$ -	$ -	$ -	$ 564	$ 564	No South County Benefit
		$ 445	$ 32	$ 2	$ 479	$ 48,967	**$ 49,446**	

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $) ... CONTINUED

Cost Center	Project Name	South County Zone W-5 Allocation	South County Zone W-7 Allocation	South County Zone W-8 Allocation	South County Allocation	North County Allocation	Total FY 2022 Allocation	Basis of Allocation
Administration & General	Unscoped Operations Activities	$ 26	$ 8	$ 1	$ 34	$ 116	$ 150	Water Usage Ratio
	WU Asset Protection Support	$ 24	$ 7	$ 0	$ 31	$ 1,203	$ 1,234	Program Benefit Calculation
	Energy Management	$ 4	$ 1	$ 0	$ 5	$ 342	$ 347	Labor Hours
	Grants Management	$ 172	$ 49	$ 4	$ 225	$ 366	$ 592	Program Benefit Calculation
	Integrated Regional Water Mgmt	$ 16	$ 5	$ 0	$ 21	$ 70	$ 91	Water Usage Ratio
	Rental Expense San Pedro,MH	$ 29	$ -	$ -	$ 29	$ -	$ 29	Benefits only South County
	WUE Administration	$ 2,091	$ 600	$ 45	$ 2,736	$ 9,168	$ 11,904	Water Usage Ratio
	WUE TW Div Admin Support	$ 398	$ 114	$ 8	$ 520	$ 1,743	$ 2,263	No South County Benefit
	WUE Technical Training Program	$ 113	$ 33	$ 2	$ 148	$ 497	$ 645	Water Usage Ratio
	Climate Change Adaptation/Mitig	$ 20	$ 6	$ 0	$ 27	$ 89	$ 115	Water Usage Ratio
	Welding Services	$ 5	$ 2	$ 0	$ 7	$ 430	$ 437	Program Benefit Calculation
	Office of Integrated Wtr Mgmt	$ 157	$ 45	$ 4	$ 205	$ 687	$ 892	Program Benefit Calculation
	Lands Management Program	$ 2	$ 1	$ 0	$ 2	$ 8	$ 11	Program Benefit Calculation
	W2 W5 Water Revenue Program	$ 886	$ 259	$ 19	$ 1,163	$ 683	$ 1,847	Labor Hours
	Water Use Measurement	$ 655	$ 188	$ 14	$ 857	$ 1,127	$ 1,984	Labor Hours
	LT Financial Planning & Rate S	$ 87	$ 25	$ 2	$ 113	$ 379	$ 493	Water Usage Ratio
	WU Customer Relations&Outreach	$ 67	$ -	$ -	$ 67	$ 957	$ 1,024	Population
	Water Supply Planning	$ 379	$ 109	$ 8	$ 496	$ 1,663	$ 2,159	Water Usage Ratio
	Water Resources Env Planning & Permitting	$ 92	$ 27	$ 2	$ 121	$ 1,924	$ 2,045	Program Benefit Calculation
	SCADA Network Administration	$ 28	$ 15	$ 0	$ 43	$ 219	$ 262	Raw Water Deliveries
	Emergency Management	$ 73	$ -	$ -	$ 73	$ 1,044	$ 1,117	Population
	Inter Agency Urban Runoff Program	$ 58	$ 32	$ 0	$ 90	$ 463	$ 553	Raw Water Deliveries
	HAZMAT Emergency Response	$ 6	$ 1	$ 0	$ 7	$ 93	$ 100	Emergency Response Events
	Hydrologic Data Msrmt & Management	$ 56	$ 122	$ 100	$ 278	$ 835	$ 1,113	Stream Gauge Location
	Warehouse Services	$ 153	$ 44	$ 3	$ 200	$ 669	$ 868	Water Usage Ratio
	X Valley Subsidence Survey	$ 15	$ 4	$ 0	$ 19	$ 334	$ 353	Program Benefit Calculation
	District Real Property Admin	$ 78	$ 22	$ 2	$ 102	$ 343	$ 445	Program Benefit Calculation
	Tree Maintenance Program	$ 55	$ 16	$ 1	$ 71	$ 240	$ 311	Water Usage Ratio
	Adjustment for Anticipated Budget Changes	$ (667)	$ (191)	$ (16)	$ (874)	$ 60	$ (814)	Water Usage Ratio
		$ 5,076	$ 1,541	$ 201	$ 6,819	$ 25,750	$ 32,569	
	TOTAL	**15,988**	**7,932**	**318**	**24,239**	**200,118**	**224,357**	

Note: Projects 91231002, 91231084, 912341085, and 91231099 have been adjusted for the Coyote Pumping Plant costs.

APPENDIX C

SOUTH COUNTY ZONE W-5 CAPITAL COST RECOVERY

(In Thousands $)

Project Name	Total Project Cost	South County Zone W-5 %	South County Zone W-5 Cost	FY 2022 Cost Recovery*	Year Cost Recovery is Complete	Basis of Allocation to South County Zone W-5
Uvas Dam and Reservoir	$ 1,124	97.7%	$ 1,099	$ 86	FY 22	Benefits Only South County
San Pedro Recharge Facility	$ 1,882	100.0%	$ 1,882	$ 147	FY 22	Benefits Only South County
San Pedro Recharge House	$ 700	100.0%	$ 700	$ 47	FY 31	Benefits Only South County
Recycled Water Improvements I	$ 7,232	100.0%	$ 7,232	$ 481	FY 31	Benefits Only South County
Recycled Water Improvements II	$ 118	100.0%	$ 118	$ 8	FY 33	Benefits Only South County
Recycled Water Improvements III	$ 1,721	100.0%	$ 1,721	$ 115	FY 33	Benefits Only South County
Water Banking Rights	$ 6,226	3.6%	$ 225	$ 15	FY 35	Total Imported Water Ratio
Dam Instrumentation	$ 6,243	16.0%	$ 999	$ 66	FY 41	Program Benefit Calculation
Geodetic Control Maintenance	$ 236	26.7%	$ 63	$ 4	FY 36	Survey Analysis
Dam Maintenance Mitigation	$ 244	16.7%	$ 41	$ 3	FY 45	Program Benefit Calculation
South County Recycled Water Masterplan, Immediate Term	$ 3,257	100.0%	$ 3,257	$ 216	FY 37	Benefits Only South County
South County Recycled Water Masterplan, Short-Term Implementation	$ 4,314	100.0%	$ 4,314	$ 286	FY 42	Benefits Only South County
South County Recycled Water Fund	$ 8,678	100.0%	$ 8,678	$ 450	FY 50	Benefits Only South County
Water Banking FY 2006	$ 18,895	4.1%	$ 769	$ 51	FY 36	Total Imported Water Ratio
San Felipe Division Capital	$ 11,158	5.5%	$ 609	$ 609	N/A	Repayment Cost Distribution
Pacheco Conduit Inspection and Rehabilitation	$ 6,696	8.1%	$ 542	$ 28	FY 48	CVP Imported Water Ratio
Pacheco Pumping Plant Regulating Tank Recoating	$ 2,550	7.7%	$ 196	$ 13	FY 42	CVP Imported Water Ratio
San Felipe Communications Cable Replacement	$ 235	7.7%	$ 18	$ 1	FY 42	CVP Imported Water Ratio
Small Caps, San Felipe Reach 1	$ 1,123	8.1%	$ 91	$ 91	N/A	CVP Imported Water Ratio
Santa Clara Tunnel Landslide	$ 4,509	6.8%	$ 308	$ 20	FY 39	CVP Imported Water Ratio
Santa Clara Tunnel Landslide Mitigation	$ 217	7.6%	$ 17	$ 1	FY 39	CVP Imported Water Ratio
Small Caps, San Felipe Reach 2	$ 10	8.1%	$ 1	$ 1	N/A	CVP Imported Water Ratio
Small Caps, San Felipe Reach 3	$ 1,370	8.1%	$ 111	$ 111	N/A	CVP Imported Water Ratio
Water Infrastructure Reliability Program	$ 2,134	1.1%	$ 24	$ 2	FY 36	Program Benefit Calculation
Water Infrastructure Baseline Improvement	$ 2,403	2.7%	$ 66	$ 4	FY 38	Spare Pipe Usage
Coyote Dam Control Building Improvement	$ 576	8.9%	$ 51	$ 3	FY 42	Anderson Deliveries Ratio
Pacheco Pumping Plant ASD Replacement	$ 18,518	8.4%	$ 1,557	$ 103	FY 45	CVP Imported Water Ratio

APPENDIX C

SOUTH COUNTY ZONE W-5 CAPITAL COST RECOVERY … CONTINUED

(In Thousands $)

Project Name	Total Project Cost	South County Zone W-5 %	South County Zone W-5 Cost	FY 2022 Cost Recovery*	Year Cost Recovery is Complete	Basis of Allocation to South County Zone W-5
Pacheco Pumping Plant ASD Replacement	$ 18,518	8.4%	$ 1,557	$ 103	FY 45	CVP Imported Water Ratio
Radio Repeater Infill	$ 5	8.5%	$ 0	$ 0	FY 42	Water Usage Ratio
Santa Clara Conduit Rehabilitation	$ 1,814	7.7%	$ 139	$ 9	FY 42	CVP Imported Water Ratio
Raw Water Control System	$ 9,188	2.8%	$ 260	$ 17	FY 37	Program Benefit Calculation
Small Caps, Raw Water Transmission and Distribution	$ 169	10.6%	$ 18	$ 18	N/A	Raw Water Usage
Main and Madrone Pipeline Restoration	$ 11,378	87.9%	$ 10,001	$ 519	FY 48	Benefits Only South County
Inf Reliability Master Plan	$ 2,065	9.4%	$ 194	$ 12	FY 46	Water Usage Ratio
Water Protection	$ 11,387	1.8%	$ 200	$ 13	FY 45	Program Benefit Calculation
Microwave Telecommunications	$ 4,595	8.8%	$ 403	$ 27	FY 44	Water Usage Ratio
Capital Warranty Services	$ 228	17.6%	$ 40	$ 40	N/A	Water Usage Ratio
5-Year Pipeline Rehabilitation	$ 22,059	3.5%	$ 775	$ 49	FY 47	Program Benefit Calculation
Pipeline Hydraulic Reliability Upgrade	$ 335	1.8%	$ 6	$ 0	FY 45	Program Benefit Calculation
WTP WQL Network Equipment	$ 116	17.6%	$ 20	$ 16	N/A	Water Usage Ratio
Winfield Capital Improvement	$ 481	9.7%	$ 47	$ 2	FY 48	Water Usage Ratio
Corp Yard Relocation	$ 26	7.8%	$ 2	$ 0	FY 40	Water Usage Ratio
Information Systems Management	$ 5,802	7.5%	$ 433	$ 29	FY 40	Water Usage Ratio
PeopleSoft Upgrade	$ 78	7.5%	$ 6	$ 0	FY 39	Water Usage Ratio
PeopleSoft System Upgrade and Expansion	$ 1,217	9.4%	$ 114	$ 7	FY 46	Water Usage Ratio
Uvas Property Acquisition	$ 1,251	97.7%	$ 1,223	$ 77	FY 46	Benefits Only South County
IT Capital Fund Transfers	$ 2,143	17.6%	$ 377	$ 377	N/A	Water Usage Ratio
Capital Program Administration	$ 2,472	16.7%	$ 412	$ 412	N/A	Total Capital Cost Ratio
Grand Total	**$ 189,179**		**$ 49,358**	**$ 4,587**		

* Capital projects that benefit South County are paid for over the life of the project (typically 30 years) beginning when the project is completed

APPENDIX C

SOUTH COUNTY ZONE W-7 CAPITAL COST RECOVERY

(In Thousands $)

Project Name	Total Project Cost	South County Zone W-7 %	South County Zone W-7 Cost	FY 2022 Cost Recovery*	Year Cost Recovery is Complete	Basis of Allocation to South County Zone W-7
Uvas Dam and Reservoir	$ 1,124	0.0%	$ -	$ -	FY 22	Benefits Only South County
San Pedro Recharge Facility	$ 1,882	0.0%	$ -	$ -	FY 22	Benefits Only South County
San Pedro Recharge House	$ 700	0.0%	$ -	$ -	FY 31	Benefits Only South County
Recycled Water Improvements I	$ 7,232	0.0%	$ -	$ -	FY 31	Benefits Only South County
Recycled Water Improvements II	$ 118	0.0%	$ -	$ -	FY 33	Benefits Only South County
Recycled Water Improvements III	$ 1,721	0.0%	$ -	$ -	FY 33	Benefits Only South County
Water Banking Rights	$ 6,226	4.4%	$ 273	$ 18	FY 35	Total Imported Water Ratio
Dam Instrumentation	$ 6,243	4.6%	$ 289	$ 19	FY 41	Program Benefit Calculation
Geodetic Control Maintenance	$ 236	14.0%	$ 33	$ 2	FY 36	Survey Analysis
Dam Maintenance Mitigation	$ 244	4.8%	$ 12	$ 1	FY 45	Program Benefit Calculation
South County Recycled Water Masterplan, Immediate Term	$ 3,257	0.0%	$ -	$ -	FY 37	Benefits Only South County
South County Recycled Water Masterplan, Short-Term Implementation	$ 4,314	0.0%	$ -	$ -	FY 42	Benefits Only South County
South County Recycled Water Fund	$ 8,678	0.0%	$ -	$ -	FY 50	Benefits Only South County
Water Banking FY 2006	$ 18,895	4.9%	$ 932	$ 62	FY 36	Total Imported Water Ratio
San Felipe Division Capital	$ 11,158	6.6%	$ 740	$ 740	N/A	Repayment Cost Distribution
Pacheco Conduit Inspection and Rehabilitation	$ 6,696	10.9%	$ 727	$ 34	FY 48	CVP Imported Water Ratio
Pacheco Pumping Plant Regulating Tank Recoating	$ 2,550	9.3%	$ 238	$ 16	FY 42	CVP Imported Water Ratio
San Felipe Communications Cable Replacement	$ 235	9.3%	$ 22	$ 1	FY 42	CVP Imported Water Ratio
Small Caps, San Felipe Reach 1	$ 1,123	9.8%	$ 110	$ 110	N/A	CVP Imported Water Ratio
Santa Clara Tunnel Landslide	$ 4,509	8.3%	$ 373	$ 25	FY 39	CVP Imported Water Ratio
Santa Clara Tunnel Landslide Mitigation	$ 217	9.3%	$ 20	$ 1	FY 39	CVP Imported Water Ratio
Small Caps, San Felipe Reach 2	$ 10	9.8%	$ 1	$ 1	N/A	CVP Imported Water Ratio
Small Caps, San Felipe Reach 3	$ 1,370	9.8%	$ 135	$ 135	N/A	CVP Imported Water Ratio
Water Infrastructure Reliability Program	$ 2,134	0.3%	$ 7	$ 0	FY 36	Program Benefit Calculation
Water Infrastructure Baseline Improvement	$ 2,403	0.8%	$ 19	$ 1	FY 38	Spare Pipe Usage
Coyote Dam Control Building Improvement	$ 576	10.7%	$ 62	$ 4	FY 42	Anderson Deliveries Ratio

APPENDIX C

SOUTH COUNTY ZONE W-7 CAPITAL COST RECOVERY … CONTINUED

(In Thousands $)

Project Name	Total Project Cost	South County Zone W-7 %	South County Zone W-7 Cost	FY 2022 Cost Recovery*	Year Cost Recovery is Complete	Basis of Allocation to South County Zone W-7
Pacheco Pumping Plant ASD Replacement	$ 18,518	10.2%	$ 1,888	$ 125	FY 45	CVP Imported Water Ratio
Radio Repeater Infill	$ 5	2.4%	$ 0	$ 0	FY 42	Water Usage Ratio
Santa Clara Conduit Rehabilitation	$ 1,814	9.3%	$ 169	$ 11	FY 42	CVP Imported Water Ratio
Raw Water Control System	$ 9,188	1.5%	$ 136	$ 9	FY 37	Program Benefit Calculation
Small Caps, Raw Water Transmission and Distribution	$ 169	5.7%	$ 10	$ 10	N/A	Raw Water Usage
Main and Madrone Pipeline Restoration	$ 11,378	12.1%	$ 1,377	$ 71	FY 48	Benefits Only South County
Inf Reliability Master Plan	$ 2,065	2.7%	$ 56	$ 4	FY 46	Water Usage Ratio
Water Protection	$ 11,387	0.5%	$ 58	$ 4	FY 45	Program Benefit Calculation
Microwave Telecommunications	$ 4,595	2.0%	$ 93	$ 8	FY 44	Water Usage Ratio
Capital Warranty Services	$ 228	5.0%	$ 11	$ 11	N/A	Water Usage Ratio
5-Year Pipeline Rehabilitation	$ 22,059	1.0%	$ 221	$ 14	FY 47	Program Benefit Calculation
Pipeline Hydraulic Reliability Upgrade	$ 335	0.5%	$ 2	$ 0	FY 45	Program Benefit Calculation
WTP WQL Network Equipment	$ 116		$ -	$ 4	N/A	Water Usage Ratio
Winfield Capital Improvement	$ 481	2.8%	$ 13	$ 1	FY 48	Water Usage Ratio
Corp Yard Relocation	$ 26	7.8%	$ 2	$ 0	FY 40	Water Usage Ratio
Information Systems Management	$ 5,802	2.2%	$ 125	$ 8	FY 40	Water Usage Ratio
PeopleSoft Upgrade	$ 78	2.2%	$ 2	$ 0	FY 39	Water Usage Ratio
PeopleSoft System Upgrade and Expansion	$ 1,217	2.7%	$ 33	$ 2	FY 46	Water Usage Ratio
Uvas Property Acquisition	$ 1,251	0.0%	$ -	$ -	FY 46	Benefits Only South County
IT Capital Fund Transfers	$ 2,143	5.0%	$ 108	$ 108	N/A	Water Usage Ratio
Capital Program Administration	$ 2,472	6.2%	$ 154	$ 154	N/A	Total Capital Cost Ratio
Grand Total	**$ 189,179**		**$ 8,449**	**$ 1,716**		

* Capital projects that benefit South County are paid for over the life of the project (typically 30 years) beginning when the project is completed

APPENDIX C

SOUTH COUNTY ZONE W-8 CAPITAL COST RECOVERY

(In Thousands $)

Project Name	Total Project Cost	South County Zone W-8 %	South County Zone W-8 Cost	FY 2022 Cost Recovery*	Year Cost Recovery is Complete	Basis of Allocation to South County Zone W-8
Uvas Dam and Reservoir	$ 1,124	2.3%	$ 25	$ 2	FY 22	Benefits Only South County
San Pedro Recharge Facility	$ 1,882	0.0%	$ -	$ -	FY 22	Benefits Only South County
San Pedro Recharge House	$ 700	0.0%	$ -	$ -	FY 31	Benefits Only South County
Recycled Water Improvements I	$ 7,232	0.0%	$ -	$ -	FY 31	Benefits Only South County
Recycled Water Improvements II	$ 118	0.0%	$ -	$ -	FY 33	Benefits Only South County
Recycled Water Improvements III	$ 1,721	0.0%	$ -	$ -	FY 33	Benefits Only South County
Water Banking Rights	$ 6,226	0.0%	$ -	$ -	FY 35	Total Imported Water Ratio
Dam Instrumentation	$ 6,243	0.4%	$ 23	$ 2	FY 41	Program Benefit Calculation
Geodetic Control Maintenance	$ 236	0.3%	$ 1	$ 0	FY 36	Survey Analysis
Dam Maintenance Mitigation	$ 244	0.4%	$ 1	$ 0	FY 45	Program Benefit Calculation
South County Recycled Water Masterplan, Immediate Term	$ 3,257	0.0%	$ -	$ -	FY 37	Benefits Only South County
South County Recycled Water Masterplan, Short-Term Implementation 1	$ 4,314	0.0%	$ -	$ -	FY 42	Benefits Only South County
South County Recycled Water Fund	$ 8,678	0.0%	$ -	$ -	FY 50	Benefits Only South County
Water Banking FY 2006	$ 18,895	0.0%	$ -	$ -	FY 36	Total Imported Water Ratio
San Felipe Division Capital	$ 11,158	0.0%	$ -	$ -	N/A	Repayment Cost Distribution
Pacheco Conduit Inspection and Rehabilitation	$ 6,696	0.0%	$ -	$ -	FY 48	CVP Imported Water Ratio
Pacheco Pumping Plant Regulating Tank Recoating	$ 2,550	0.0%	$ -	$ -	FY 42	CVP Imported Water Ratio
San Felipe Communications Cable Replacement	$ 235	0.0%	$ -	$ -	FY 42	CVP Imported Water Ratio
Small Caps, San Felipe Reach 1	$ 1,123	0.0%	$ -	$ -	N/A	CVP Imported Water Ratio
Santa Clara Tunnel Landslide	$ 4,509	0.0%	$ -	$ -	FY 39	CVP Imported Water Ratio
Santa Clara Tunnel Landslide Mitigation	$ 217	0.0%	$ -	$ -	FY 39	CVP Imported Water Ratio
Small Caps, San Felipe Reach 2	$ 10	0.0%	$ -		N/A	CVP Imported Water Ratio
Small Caps, San Felipe Reach 3	$ 1,370	0.0%	$ -	$ -	N/A	CVP Imported Water Ratio
Water Infrastructure Reliability Program	$ 2,134	0.0%	$ 1	$ 0	FY 36	Program Benefit Calculation
Water Infrastructure Baseline Improvement	$ 2,403	0.1%	$ 2	$ 0	FY 38	Spare Pipe Usage
Coyote Dam Control Building Improvement	$ 576	0.0%	$ -	$ -	FY 42	Anderson Deliveries Ratio

APPENDIX C

SOUTH COUNTY ZONE W-8 CAPITAL COST RECOVERY … CONTINUED

(In Thousands $)						
Project Name	**Total Project Cost**	**South County Zone W-8 %**	**South County Zone W-8 Cost**	**FY 2022 Cost Recovery***	**Year Cost Recovery is Complete**	**Basis of Allocation to South County Zone W-8**
Pacheco Pumping Plant ASD Replacement	$ 18,518	0.0%	$ -	$ -	FY 45	CVP Imported Water Ratio
Radio Repeater Infill	$ 5	0.2%	$ 0	$ 0	FY 42	Water Usage Ratio
Santa Clara Conduit Rehabilitation	$ 1,814	0.0%	$ -	$ -	FY 42	CVP Imported Water Ratio
Raw Water Control System	$ 9,188	0.0%	$ 2	$ 0	FY 37	Program Benefit Calculation
Small Caps, Raw Water Transmission and Distribution	$ 169	0.1%	$ 0	$ 0	N/A	Raw Water Usage
Main and Madrone Pipeline Restoration	$ 11,378	0.0%	$ -	$ -	FY 48	Benefits Only South County
Inf Reliability Master Plan	$ 2,065	0.2%	$ 4	$ 0	FY 46	Water Usage Ratio
Water Protection	$ 11,387	0.0%	$ 5	$ 0	FY 45	Program Benefit Calculation
Microwave Telecommunications	$ 4,595	0.2%	$ 7	$ 1	FY 44	Water Usage Ratio
Capital Warranty Services	$ 228	0.4%	$ 1	$ 1	N/A	Water Usage Ratio
5-Year Pipeline Rehabilitation	$ 22,059	0.1%	$ 18	$ 1	FY 47	Program Benefit Calculation
Pipeline Hydraulic Reliability Upgrade	$ 335	0.0%	$ 0	$ 0	FY 45	Program Benefit Calculation
WTP WQL Network Equipment	$ 116		$ -	$ 0	N/A	Water Usage Ratio
Winfield Capital Improvement	$ 481	0.2%	$ 1	$ 0	FY 48	Water Usage Ratio
Corp Yard Relocation	$ 26	7.8%	$ 2	$ 0	FY 40	Water Usage Ratio
Information Systems Management	$ 5,802	0.2%	$ 10	$ 1	FY 40	Water Usage Ratio
PeopleSoft Upgrade	$ 78	0.2%	$ 0	$ 0	FY 39	Water Usage Ratio
PeopleSoft System Upgrade and Expansion	$ 1,217	0.2%	$ 3	$ 0	FY 46	Water Usage Ratio
Uvas Property Acquisition	$ 1,251	2.3%	$ 28	$ 2	FY 46	Benefits Only South County
IT Capital Fund Transfers	$ 2,143	0.4%	$ 8	$ 8	N/A	Water Usage Ratio
Capital Program Administration	$ 2,472	0.1%	$ 2	$ 2	N/A	Total Capital Cost Ratio
Grand Total	**$ 189,179**		**$ 145**	**$ 20**		

* Capital projects that benefit South County are paid for over the life of the project (typically 30 years) beginning when the project is completed

APPENDIX D

ACRONYMS

ADSR	Anderson Dam Seismic Retrofit Project
ADTP	Anderson Dam Tunnel Project
AF	Acre-Foot or Acre-Feet
AFY	Acre-Feet of Year
AG	Agriculture
AMM	Avoidance and Minimization Measures
AWPF	Advanced Water Purification Facility
Basin	San Joaquin Basin
Bay-Delta Plan	San Francisco/Sacramento-San Joaquin Delta Estuary
Board	Board of Directors
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CIP	Capital Improvement Program
CoRe Plan	Countywide Water Reuse Master Plan
CVP	Central Valley Project
Delta	Sacramento-San Joaquin Delta
DSOD	Department of Water Resources, Division of Safety of Dams
DWR	Department of Water Resources
ESA	Endangered Species Act
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FERC	Federal Energy Regulatory Commission
FHRP	FAHCE fish habitat restoration plan
FOCP	FERC Order Compliance Project
FWS	Fish and Wildlife Service
FY	Fiscal Year
GP 5	Guiding Principal #5
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GW	Groundwater
GWMP	Groundwater Management Plan
HCP	Habitat Conservation Plan
IPR	Indirect Potable Reuse
Llagas Subbasin	Groundwater Subbasin as defined by DWR bulletin 118-2003 and as shown in map of Groundwater Subbasins, area south of Cochrane Road
MAP	Water Supply Master Plan's Monitoring and Assessment Program
M&I	Municipal and Industrial
NMFS	National Marine Fisheries Service
NPR	Non-Potable Recycled
North County	Northern Santa Clara County, north of Metcalf Road
P3	Public-Private Partnership
Reclamation	Bureau of Reclamation
RFC	Raftelis Financial Consultants, Inc.
RW	Recycled Water
RWF	Regional Wastewater Facility

APPENDIX D

ACRONYMS ... CONTINUED

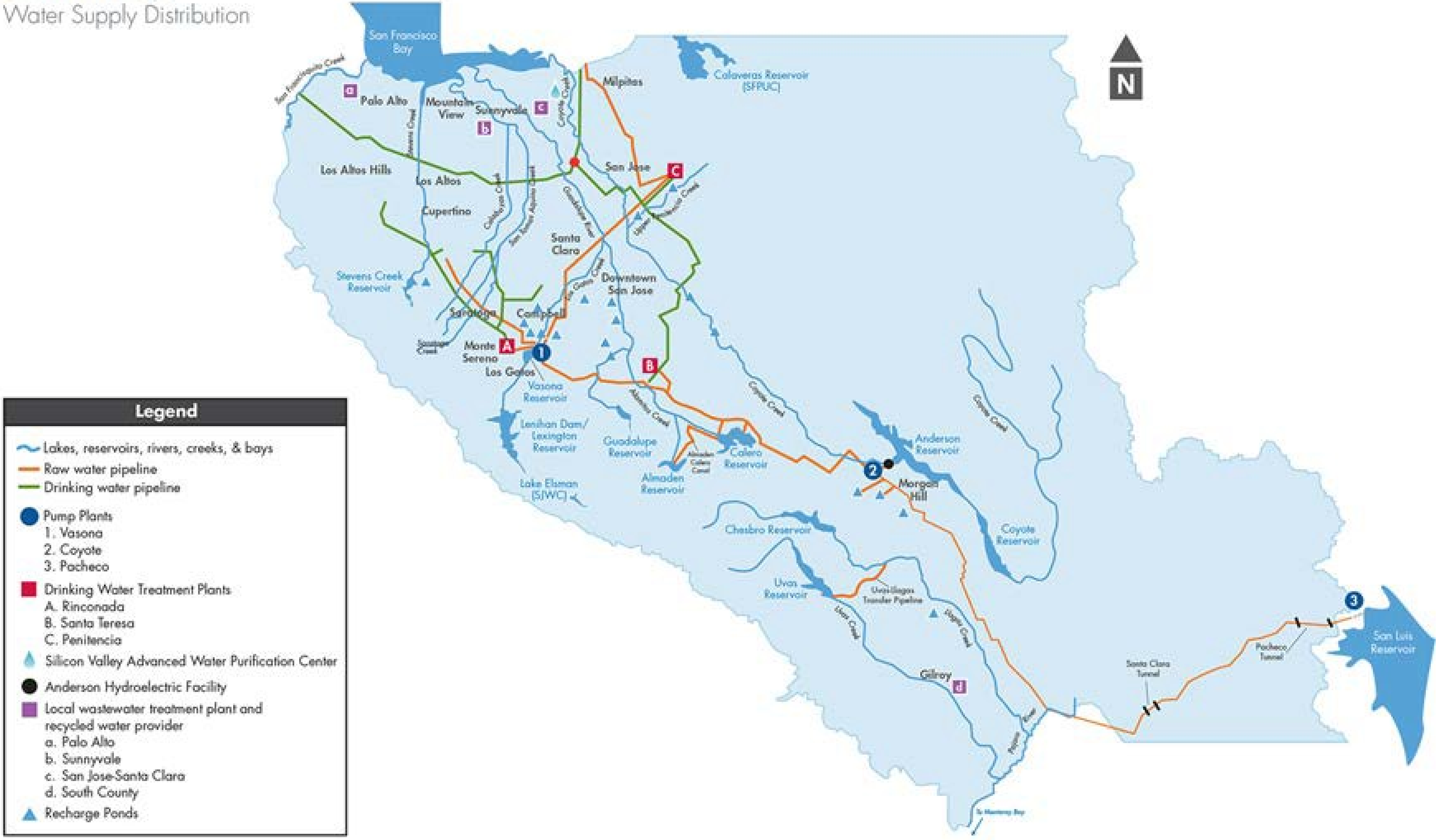
RWS	Recycled Water System
Santa Clara Subbasin	Groundwater Subbasin as defined by DWR bulletin 118-2003 and as shown in map of Groundwater Subbasins, area north of Cochrane Road and includes Coyote Valley
SCRWA	South County Regional Wastewater Authority
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
SBWR	South Bay Water Recycling
South County	Southern Santa Clara County, south of Metcalf Road
SW	Surface Water
SWP	State Water Project
SWRCB	State Water Resources Control Board
Three Creeks	Guadalupe River, Coyote Creek and Stevens Creek
TW	Treated Water
Valley Water	Santa Clara Valley Water District
WSIP	Water Storage Investment Program

APPENDIX E

MAPS

District map

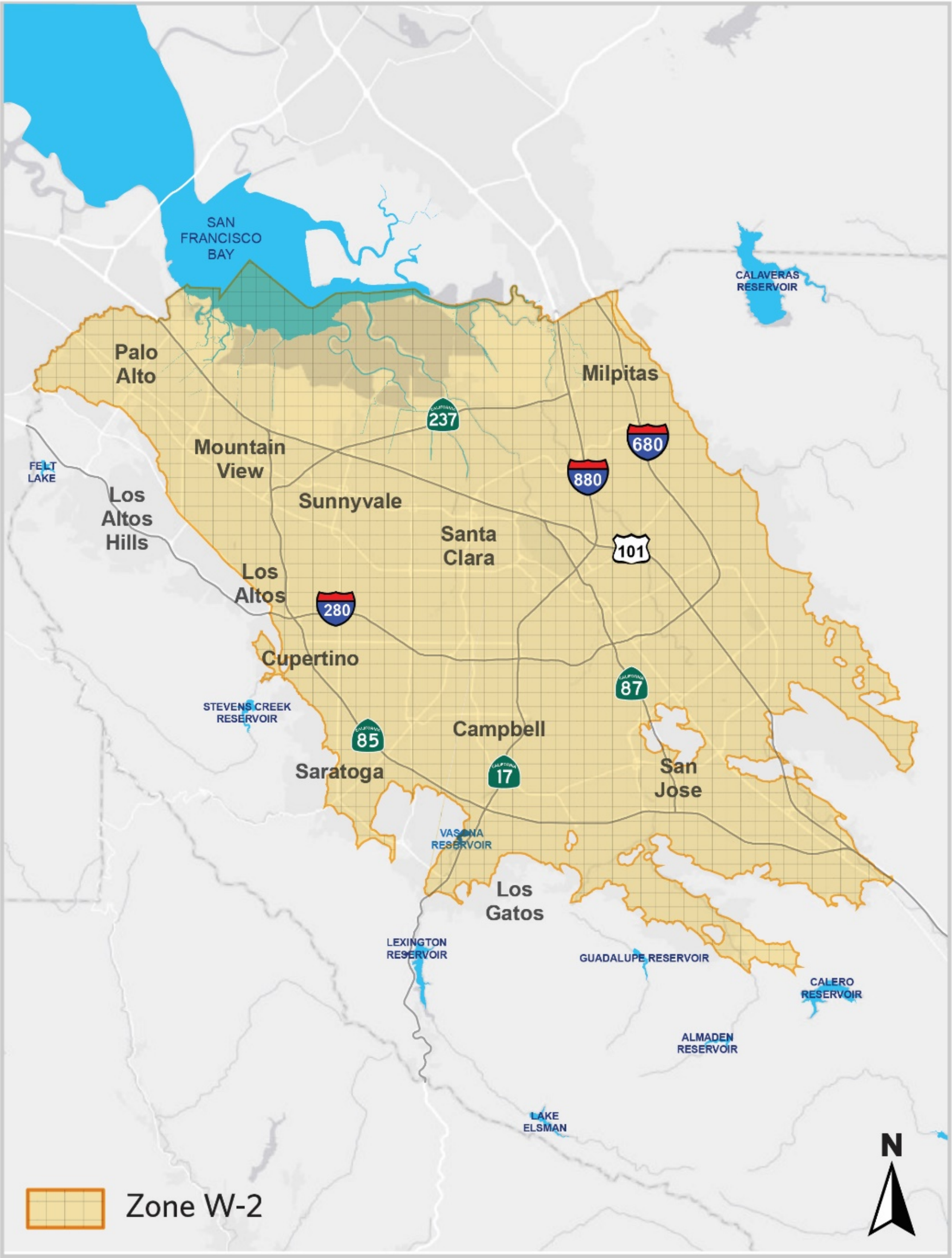
Water Supply Distribution



APPENDIX E

MAPS ... CONTINUED

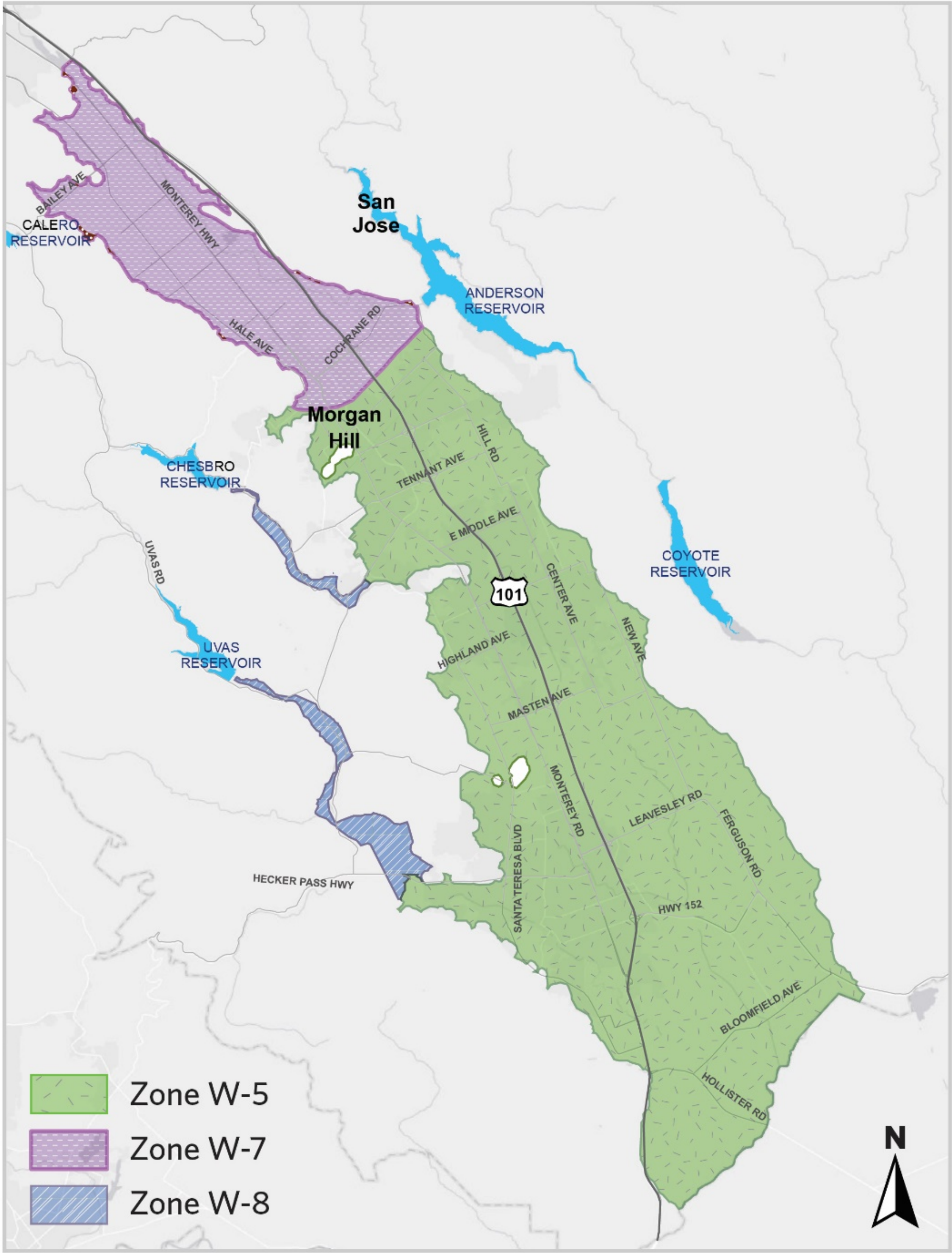
WATER UTILITY ZONE W-2 IN NORTH SANTA CLARA COUNTYY



APPENDIX E

MAPS ... CONTINUED

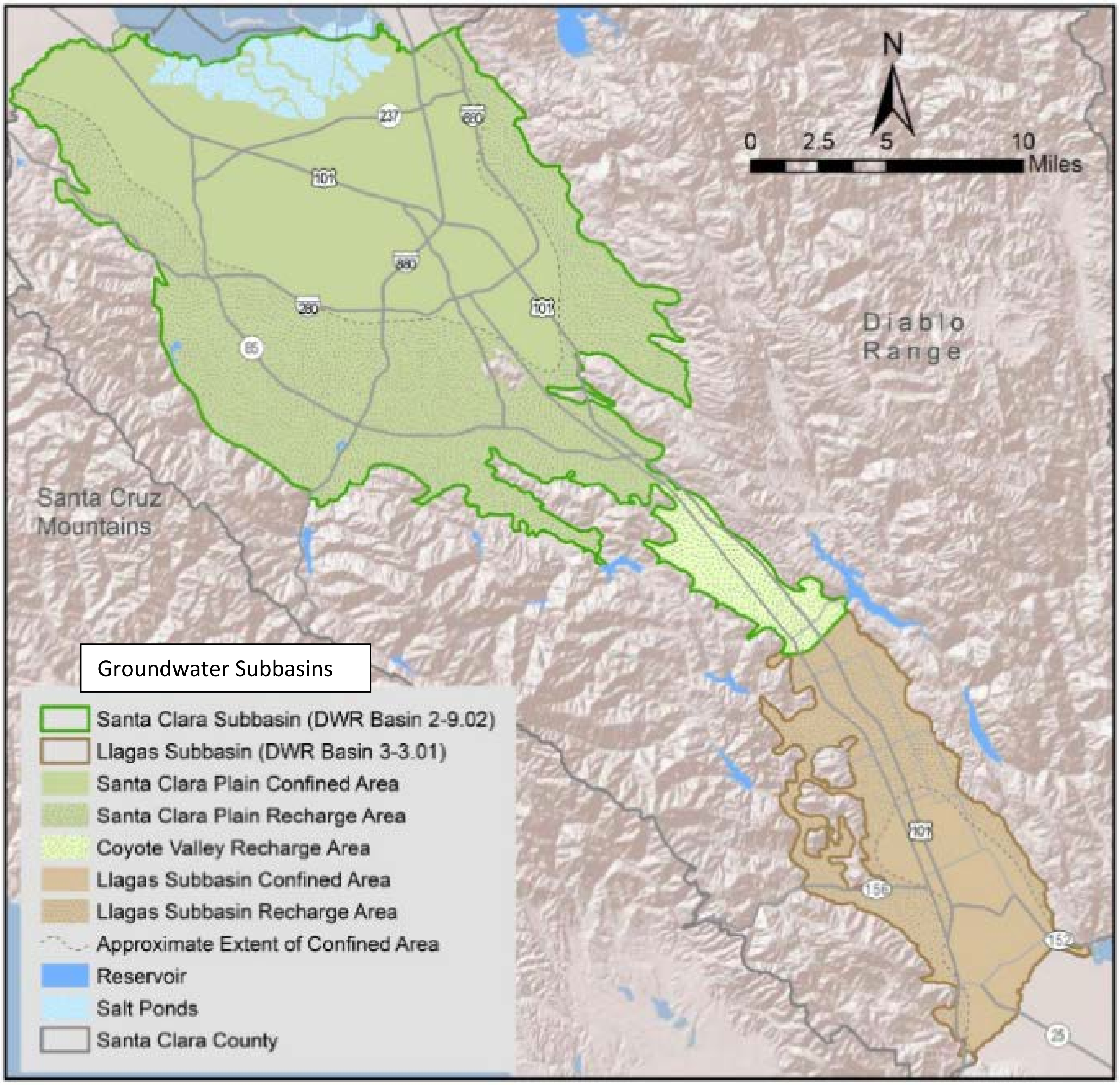
WATER UTILITY ZONES W-5, W-7 AND W-8 IN SOUTH SANTA CLARA COUNTY



APPENDIX E

MAPS ... CONTINUED

GROUNDWATER SUBBASINS IN SANTA CLARA COUNTY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Miles
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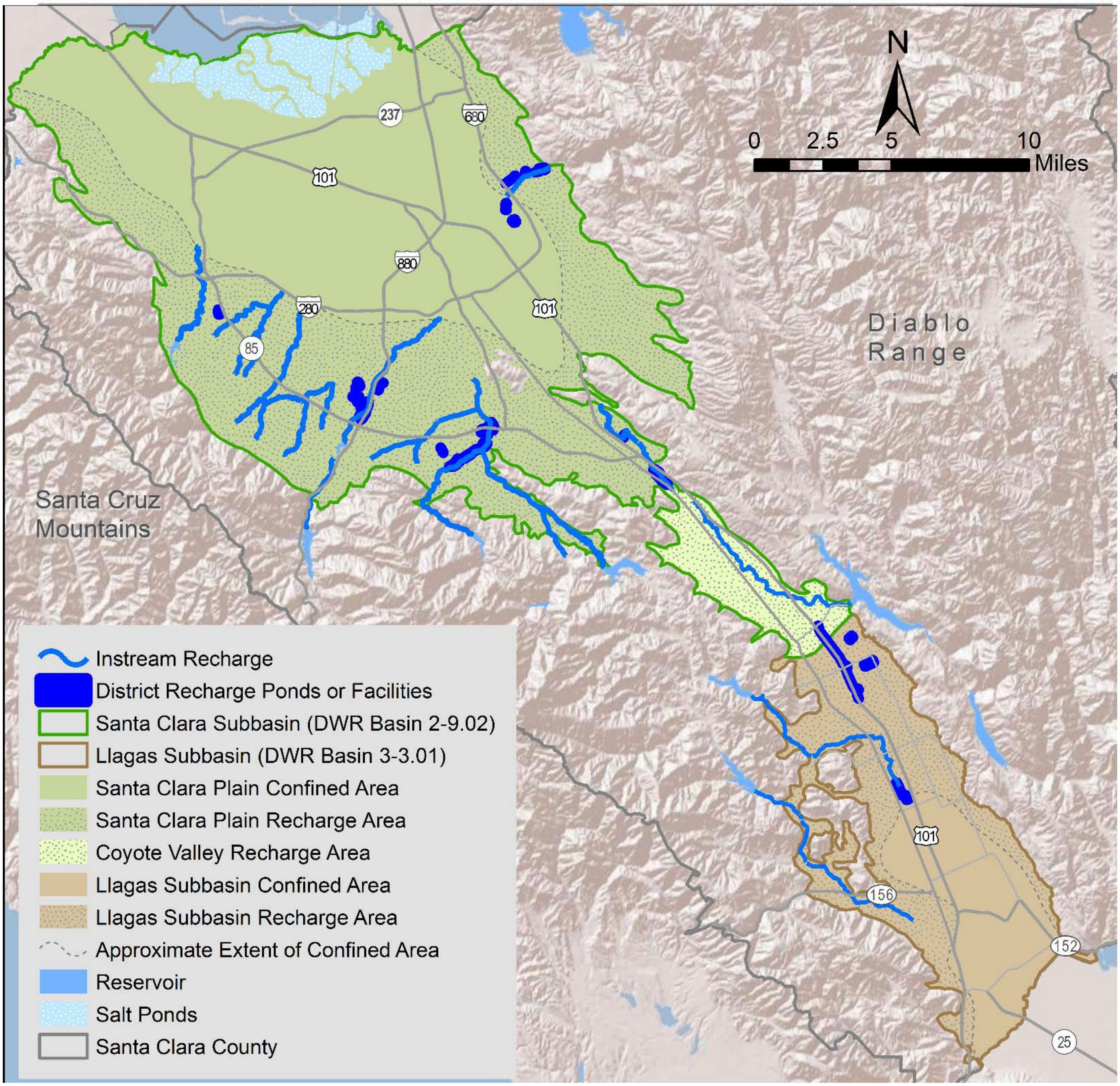
880
101
880
280
101
85
Diablo Range
Santa Cruz Mountains
101
156
152
25
Groundwater Subbasins
Santa Clara Subbasin (DWR Basin 2-9.02)
Llagas Subbasin (DWR Basin 3-3.01)
Santa Clara Plain Confined Area
Santa Clara Plain Recharge Area
Coyote Valley Recharge Area
Llagas Subbasin Confined Area
Llagas Subbasin Recharge Area
Approximate Extent of Confined Area
Reservoir
Salt Ponds
Santa Clara County

APPENDIX E

MAPS ... CONTINUED

GROUNDWATER SUBBASINS IN SANTA CLARA COUNTY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Diablo Range
Santa Cruz Mountains
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156
152
25
Instream Recharge
District Recharge Ponds or Facilities
Santa Clara Subbasin (DWR Basin 2-9.02)
Llagas Subbasin (DWR Basin 3-3.01)
Santa Clara Plain Confined Area
Santa Clara Plain Recharge Area
Coyote Valley Recharge Area
Llagas Subbasin Confined Area
Llagas Subbasin Recharge Area
Approximate Extent of Confined Area
Reservoir
Salt Ponds
Santa Clara County

APPENDIX F

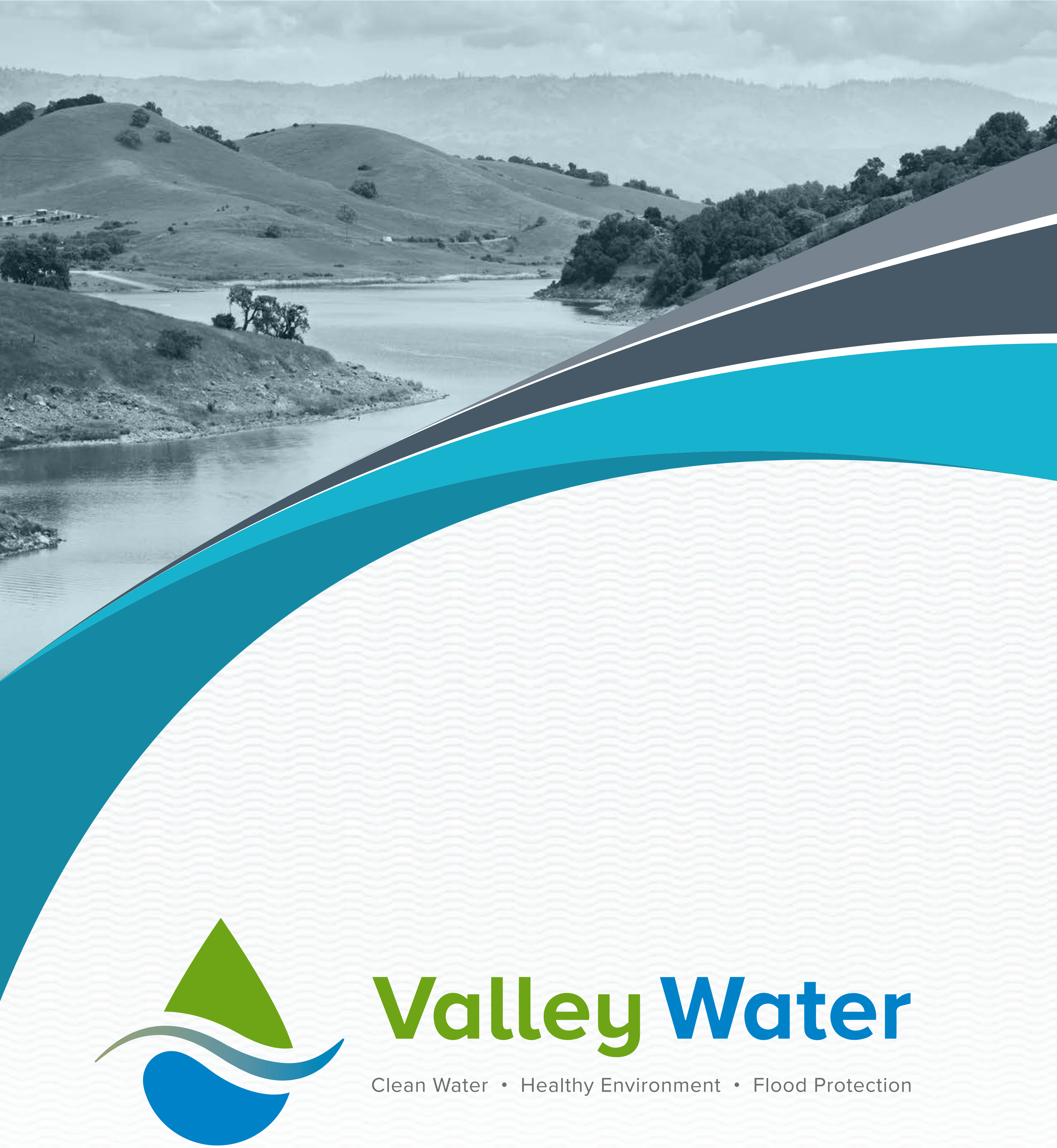
GROUNDWATER PRODUCTION AND MANAGED RECHARGE BY GROUNDWATER BENEFIT ZONE

North County Charge Zone					
Calendar Year	**Charge Zone**	**Groundwater Production, acre-feet**			**Managed Recharge**
		Groundwater Agricultural (AF)	**Groundwater Non Agricultural (AF)**	**Groundwater Total (AF)**	**Recharge (AF)**
Est. 2020	Zone W2	700	78,800	79,500	44,000
Prelim. 2019	W2	300	57,200	57,500	43,100
2018	W2	486	62,984	63,470	66,100
2017	W2	312	69,295	69,607	66,200
2016	W2	398	55,318	55,716	93,100
2015	W2	556	65,340	65,896	28,300
2014	W2	885	113,726	114,611	11,200
2013	W2	502	94,774	95,276	53,900
2012	W2	425	75,930	76,355	55,940
2011	W2	279	71,008	71,287	54,820
2010	W2	437	84,185	84,622	58,540
2009	W2	605	97,233	97,838	63,000
2008	W2	1,058	106,592	107,650	51,290
2007	W2	1,032	108,771	109,803	58,000
2006	W2	387	82,380	82,767	65,770
2005	W2	834	86,615	87,449	69,200
2004	W2	552	105,114	105,666	66,700
2003	W2	413	96,253	96,666	74,200
2002	W2	617	104,129	104,746	71,660
2001	W2	713	114,651	115,364	84,620
2000	W2	919	112,435	113,354	88,400
1999	W2	1,028	106,263	107,291	80,900
1998	W2	1,010	99,383	100,393	66,670
1997	W2	1,782	118,725	120,507	78,040

APPENDIX F

GROUNDWATER PRODUCTION AND MANAGED RECHARGE BY GROUNDWATER BENEFIT ZONE

South County Charge Zones					
Calendar Year	**Charge Zone**	**Groundwater Production, acre-feet**			**Managed Recharge**
		Groundwater Agricultural (AF)	**Groundwater Non Agricultural (AF)**	**Groundwater Total (AF)**	**Recharge (AF)**
Est. 2020	Zone W5	20,700	18,900	39,600	12,500
	Zone W7	2,500	8,300	10,800	19,200
	Zone W8	400	400	800	5,400
	Subtotal	***23,600***	***27,600***	***51,200***	***37,100***
Prelim. 2019	W5	24,400	26,600	51,000	41,500
2018	W5	26,682	28,394	55,075	34,600
2017	W5	25,566	28,625	54,191	34,400
2016	W5	25,334	26,297	51,631	46,700
2015	W5	24,697	24,941	49,638	26,100
2014	W5	25,906	28,578	54,484	15,000
2013	W5	26,359	32,948	59,307	37,100
2012	W5	24,934	30,892	55,825	40,790
2011	W5	22,444	29,827	52,271	39,360
2010	W5	22,037	30,249	52,286	42,210
2009	W5	24,853	32,441	57,293	39,100
2008	W5	28,341	33,478	61,819	36,100
2007	W5	27,697	31,332	59,029	33,410
2006	W5	24,492	30,336	54,828	30,440
2005	W5	25,149	25,238	50,387	32,500
2004	W5	27,547	25,563	53,110	31,000
2003	W5	25,981	24,182	50,163	35,000
2002	W5	27,155	25,534	52,689	35,300
2001	W5	28,190	25,395	53,585	32,040
2000	W5	26,921	24,497	51,418	30,200
1999	W5	29,056	23,763	52,819	26,500
1998	W5	25,831	20,064	45,895	26,130
1997	W5	32,521	21,741	54,261	32,120



Valley Water

Clean Water • Healthy Environment • Flood Protection

Santa Clara Valley Water District
5750 Almaden Expressway, San José, CA 95118-3686
Phone: (408) 265-2600   Fax: (408) 266-0271
www.valleywater.org

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